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Chemical Trade Journal
Supplement. March 20, 1897.

THE

CHEMICAL TRADE JOURNAL:

A WEEKLY NEWSPAPER DEVOTED TO

The Commercial Aspect of the Chemical and Allied Industries.

EDITED BY

GEORGE E. DAVIS,

FORMERLY ONE OF HER MAJESTY'S INSPECTORS OF ALKALI WORKS.
CHEMICAL ENGINEER AND CONSULTING CHEMIST.

VOLUME XIX.

[JULY TO DECEMBER, 1896.]

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HENRY M. JACKSON,
Secretary.

Gas Works, Brierley Hill,
June 20, 1896.

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STILL THEY C ME.

WITHIN the last few days the British public has had an excellent opportunity of joining in at the great confidence trick. We allude to the issue of the prospectus of the Scott-Vogt Chemical Co., Ltd., and, although we are of opinion that the *Chemical Trade Journal* circulates amongst a portion of the community too intelligent to accept the invitation, we think it may not be out of place to devote a few words of criticism to this truly remarkable prospectus.

The share capital—on the principle, we presume, of "in for a penny, in for a pound"—is put down at £150,000., in £1. shares, of which 118,000 are offered to the public, and 32,000 are to be taken by the vendors in part payment of the purchase money. After the contemplation of these last figures, one is really surprised at the self abnegation on the part of the vendors which leads them to merely ask for a trifle of £13,000. in cash in addition.

We take exception to the prospectus because it bristles with mis-statements and suppressions, and we take exception to the whole scheme because not only does it contain nothing that is really new, but it does not offer the slightest guarantee that the unfortunate investors in this enterprise will start on even an equal footing with others who have already entered upon the manufacture of nitric acid chlorine.

Referring to our first point, we find the stale old figure of 150,000 tons of bleach and chlorates is raked up to mislead the investors into thinking that they would be entering into the manufacture of an article for which there must be an overwhelming demand, whereas the real facts of the case are that the annual production of Great Britain has now fallen so far below this figure as to tax even the conscience-soothing elasticity of the word "about," and that bleach is such a drug in the market that the great difficulty of manufacturers is not to produce but to dispose of it.

Then we are told that the leading distinctive feature of the Scott-Vogt process is that practically the whole of the chlorine contained in salt can be converted into bleaching powder. Now, if this is not a misrepresentation, we must confess that we do not know the meaning of the word, as it is a well-known fact that this feature is shared by all the nitric acid chlorine processes, and nobody should be better aware of the fact than the gentleman whose name appears first on the list of directors of the Scott-Vogt Chemical Co. It would perhaps be more accurate to say that all the hydrochloric acid *can* be converted into chlorine if put through the process often enough, but we presume this is much too small a detail to find a place in this prospectus.

We are not going to quibble about the estimated cost of production, which is put down at £4. per ton, seeing that this is based upon a production of half-a-hundred-weight per day by a process which one of the experts, whose report is given, says "will in all probability be commercially successful," but

we really cannot take seriously the estimate of an addition to revenue which is based upon the sales of patents and royalties. We take it, too, that there is a touch of humour in that paragraph of the prospectus which says that the apparatus, on account of "its non-complicated and compact nature" and "its simplicity of working lends itself to be readily adapted by paper-makers," for instance, who may wish to make their own bleaching powder. If this paragraph had also mentioned the number of tons of vitriol required by this process for, say, ten tons of bleach per week, the attraction to the paper-makers would perhaps be somewhat discounted.

Then we come to a paragraph which is more easily reconciled with the certificates of the experts than with the patent specification upon which the whole undertaking is based. The patent specification says that the hydrochloric acid is "preferably" used in a gaseous condition, and incidentally mentions the acid as coming from the "ordinary" salt-decomposing furnace, but the prospectus speaks of the purity of the chlorine as rendering it specially suitable for condensation, and one of the experts certifies to its being free from admixture of air or nitrogen, so that we are somewhat at a loss to know whether this half ton a day plant was worked under the conditions marked "preferably" in the patent, or whether the patentees had such a lot up their sleeve that could make their bleach for £4. per ton under conditions which were admittedly less advantageous than they might have been.

As the reports of the experts and others are made responsible for the statements which appear in the prospectus we think it only fair that those reports which are given should be subjected to a little investigation. The most unsatisfactoy feature about them is their utter want of definition. Mr. John Clark, of the City Analyst's Laboratory Glasgow, estimated on the 24th of February, 1896, that the cost of bleaching powder made by the Scott-Vogt process would not exceed £4. 4s. 6d. per ton, exclusive of interest on capital, depreciation, and administration, and on the 9th of April, 1896, he modified this figure by a reduction of about 4s. per ton. But there is absolutely nothing in his report or in the prospectus to show how these figures were obtained, and the fact that they emanate from a City Analyst's Laboratory renders it all the more necessary that particulars should be given in such detail that they can be followed and weighed up by those acquainted with manufacturing processes. This necessity is emphasised by the general form of Mr. Clark's report. He says that this plant "is a very complete and perfect model of what is required to work the process on the large scale," and then proceeds to admit that from this complete and perfect model 15% of hydrochloric acid was lost in the dehydrator. "Lost" does not seem to us the correct word to employ; there is an old saying that "Whist never forgets," and this is even more applicable to a nitric acid-chlorine process. Whatever is lost in the prospectus sense of the word is in reality stored up as a future source of trouble, and we venture to affirm that a nitric acid-chlorine process which "lost" 15% of its hydrochloric acid could only be described as utterly unworkable. It is perfectly true that this loss was stated by Mr. Clark a few months later to have been reduced from 15% to 2½%, but as he does not say that the complete and perfect model had in the meantime been made more complete and more perfect, we were bound to assume that this non-complicated, this compact, this simple apparatus is associated with possibilities which are perfectly appalling. Then again, we have read and re-read Mr. Clark's report without having been able to satisfy ourselves that the nitric acid employed was really re-converted into nitric acid, and used over again. His actual words are, "The nitric acid employed in producing the chlorine with the exception of 4·8% is recovered as nitrous sulphuric acid and re-converted into nitric acid by a well-known process, and the sulphuric acid is re-concentrated and used over again." Later on, when estimating the cost of production, he allows for the "re-concentration of the actual quantity of sulphuric acid used for de-hydration," but says nothing of the dilute sulphuric acid arising from the re-conversion of the nitric acid by the "well-known process." From this we gather that the 4·8% represents the discrepancy between the amount of nitric acid entering the process and that recovered as nitrous sulphuric acid. If this is so, and if Mr. Clark is aware, as he should be, that a very serious loss of nitric acid occurs in the re-conversion of nitric acid from nitrous sulphuric acid saturated with chlorine, we think he should have pointed out that the 4·8% was only the first instalment of the total loss of nitric acid, and if on the other hand he intends this 4·8% to actually represent the total loss of nitric acid, it would have been more comforting to intending investors who are capable of appreciating the position if he had said so in language that was only capable of one interpretation. Mr. Clark's opinion, too, that the Vogt and Scott process is superior to those of Davis, Donald, and Wallis would probably have had more weight if he had deigned to specify the particular grounds upon which his opinion is based. We think he would have had still more difficulty in saying wherein the specification of Messrs. Vogt and Scott, dated June 20th, 1893, differs from that of Mr. Henry Weston Wallis, of July 29th, 1892.

But perhaps the most amusing feature of the whole prospectus, and the one that most clearly shows the faith of the promoters of this company in the good nature of the investing public, is the report by Mr. J. B. Readman, of Edinburgh. This report carefully avoids all details, devotes a dozen lines to saying nothing in a pleasant and agreeable way, and finishes up with the opinion we have already quoted, "*that the process will in all probability be commercially successful if carried out on a manufacturing scale.*" Why damn such a promising undertaking with such faint praise?

The Scott-Vogt Chemical Co., Ltd.—During this week the subscription list of this company has been open. The company has been formed to acquire and develop in Great Britain, Ireland, Germany, France, and Belgium, the patents of Andrew Ross Scott and Adolph Vogt, for "improvements in obtaining chlorine," these patents being held by the Scott-Vogt Syndicate. It has long been felt by all chemists engaged in the manufacture of bleaching powder that some method remained to be discovered whereby a larger percentage of the chlorine contained in the salt used could be utilised. This is now claimed to have been accomplished by Messrs. Scott and Vogt, who are stated to have succeeded in practically utilising the whole of the chlorine in the salt. Plant on a small practical scale producing bleaching powder has been in operation for a considerable time in the works of the Carntyne Chemical Company, Ltd., at Parkhead, Glasgow, where it is now working. The successful working of the above plant has, it is stated, clearly demonstrated the practicability of the Scott-Vogt process, as several tons of bleaching powder have been produced by it. It is proposed to erect the first works in Glasgow or neighbourhood, and to lay down the plant in successive installations, each complete in itself, until an aggregate output is reached of at least 20 tons per day. From the results obtained during the working of the plant at Parkhead, it has been calculated that the cost of bleaching powder by this process will not exceed £4. per ton. No promotion money has been or will be paid. The share capital is £150,000., in 150,000 shares of £1 each, of which 32,000 shares are taken by the vendors in part payment of the purchase money. Subscriptions were invited for the remaining 118,000 shares. Sir John Neilson Cuthbertson is chairman of the company, and nearly all the other directors are well-known Glasgow men.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Explosives. M. J. E. Morris. 13,152. June 15.
Separating Zinc and Lead from Sulphide Ores. B. Mohr. 13,169. June 15.
Manufacturing Waterproof Gypsum Stone. P. Kleber. 13,187. June 15.
Manufacture of Candles. F. Bougère. 13,223 June 16.
Manufacture of Waterproofing Solutions. K. A. Frosell. 13,238. June 16.
Ferric Oxides. A. Crossley and H. A. Allport. 13,244. June 16.
Explosives. L. Kelbetz. 13,269. June 16.
Explosives. L. Kelbetz 13,269. June 16.
Recovering Zinc from Slags. J. David and C. Le Doux Glais. 13,337. June 17.
Improvements in Chlorination. O. Frölich. 13,371. June 17.
Electrolytic Apparatus. C. Kellner. 13,407. June 17.
Improved Manufacture of Carbonates of Soda. F. H. Bowman, J. J. Hewitt, J. Knowles, and T. A. Reid. 13,446. June 18.
Manufacture of Carbon Anodes. P. Jensen. 13,521. June 18.
Producing Peat Paving Blocks, Tiles, etc. R. F. Strong. 13,649 June 20.
Improvements in Disc Crushing Mills. E. E. Bentall. 13,652. June 20.
Continuous Tanning Process. H. Schmidt and J. Landini. 13,686. June 20.
Improved Electrolytic Apparatus. A. C. Royer, A. E. Bonna, and P. Van Berchem. 13,630. June 20.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Refining Oils. J. Y. Johnson, 47, Lincoln's-inn Fields, London (communicated by the Ohio Oil Improvement Company, Cleveland, U.S.A.). Eng. Pat. 8,348. April 21, 1896.

The objectionable odour of Lima or Ohio oils and other sulphurous petroleums has hitherto been a great drawback, and has practically prevented these oils being used for illuminating purposes. This invention aims at the removal of these objectionable compounds by treating the oil with lead and carbon. The process consists in bringing the crude distillate into contact with an active agent such as lead and an inactive agent like carbon, these two substances having been found to give the best results. The most convenient form of treatment is to pass the oil over alternate plates of lead and carbon placed close together, but not actually touching each other. The action on the oil is as peculiar as it is interesting. The exact nature of the change is not known. When under treatment, in about half-an-hour the oil turns to a dark-red mahogany colour, becoming almost opaque. When treated with acid a liquid mass settles to the bottom, out of which a whitish powder precipitates, while the clear product can be separated by decantation. Though lead appears to be the active agent, yet when lead alone is used the oil only becomes cloudy, and only an imperfect purification can subsequently be obtained during the acid and alkali treatment. It would appear that by some oxidation process the sulphur compounds are rendered amenable to the action of the acid. There are two drawings showing a suitable arrangement for treating the oil.

Improvements in Apparatus Employed for Concentrating Sulphuric and other Acids. R. Wilson, 117, Charterhouse-street, London, E.C. Eng. Pat. 14,221. July 26, 1895.

This patent refers to an improvement in the porcelain or other vessels used in rectifying vitriol by the cascade process. The cylindrical vessels as usually employed, with a bib or spout on one side, are provided in addition with a midrib or partition of semi-circular section, which extends from about one inch from the bottom, to the top of the vessel, and is so fastened to the sides of the vessel as to form an enclosed channel or pipe up which the acid must rise before it can escape by the spout. Thus when arranged in series the acid flowing into one vessel cannot escape until it has passed to the bottom, and thence up to the top, through the channel formed by the midrib and the sides of the vessel. It is supposed that in this way a more perfect circulation of the acid is ensured, the stronger acid which collects at the bottom being gradually displaced by the supernatant and weaker acid, as the latter becomes concentrated. There are three figures showing details of the vessels, &c.

Improvements in Alkaline Saccharates. W. R. Hutton, 90, Dobbies Loan, Glasgow. Eng Pat., 13,851. July 20, 1895.

The patentee prepares alkaline saccharates of fixed composition by combining sugar or syrup with alkaline earths and alkalies. The best proportions, as indicated by experimental trials, are twelve parts by weight of dry caustic lime, magnesia, lithia, potash, or soda, to every hundred parts of sugar.

Improvements in Acid Pumps. E. P. Peyton, Lister-street, Birmingham. Eng. Pat., 15,425. Aug. 16, 1895.

The majority of pumps specially designed for acids and other corrosive liquids have earthenware pistons, which in time become saturated with acid and crumble away, the cement by which the iron connecting rod is attached to the earthenware cylinder being attacked at the same time. To overcome this the patentee employs ordinary flint glass cylinders, the glass being absolutely non-porous and practically unattacked by chemicals. The general arrangement is much the same as usual, but there are one or two points in the construction worth noticing. The upper and open end of the glass cylinder is contracted somewhat, while the axial rod is roughened on the surface, so as to give a good grip. In this way it is almost impossible for the rod and cement to be accidentally withdrawn. Between the top of the glass cylinder and the metallic flange on the iron connecting rod an india-rubber washer is interposed. When for any reason it is desirable to employ earthenware or porcelain for the pistons, the latter are steeped in a bath of paraffin wax or resin, or a solution of the same in a suitable solvent. For the latter treatment enamelling is suggested as an alternative.

THE MINERAL OIL INQUIRY.

FOLLOWING hard upon Sir H. Roscoe, Professor Dewar gave evidence on behalf of the London Chamber of Commerce before this Committee. He commenced by showing that in 1874 the consumption of refined petroleum in this country was at the rate of 640 gallons per thousand of the population. In 1884 it had risen to 1,084 gallons, and in 1894 it reached the high figure of 3,482 gallons. The inference from these figures was that the consumption was likely to go on increasing. The importations of petroleum into London amounted in 1890 to 986,233 barrels, and in 1895 it had risen to 1,500,000. From the reports of the chief officer of the Fire Brigade it appeared that in 1890 there were 271 lamp accidents and 473 in 1895. It was calculated, however, that there were 10,000,000 lamps in use every night of the year in the United Kingdom, so that the number of accidents was proportionately exceedingly small. From experiments he had made he had come to the conclusion that, if Parliament undertook legislation that would convey to the public that oil could be safely used in the present lamps, they would have to fix the flash-point at 212°F., so that really it was impracticable to insure safety in the use of mineral oils by careless persons in the present lamps by simply raising the flash-point. The witness then described a number of experiments he had made with various lamps, from the results of which he contended that there was but little difference in the risk of accident from the use of oil of 100 flashing-point and from the use of oil of 73 flashing-point in the lamps at present in use. It was clear, to his mind, that if the flash-point was raised to 100 it would be necessary to have legislation in regard to the construction of mineral oil lamps. If the flash-point were raised to 100 it must have a serious effect on the cost of oil.

Although a mass of evidence has been laid before the Petroleum Committee, a large number of witnesses have yet to be called, and the impossibility of concluding the inquiry within the limits of the present session is now conceded As will have been noted from the reports published in our columns, a good deal of the scientific testimony which has been adduced points to the superiority of Scotch oils for use in lamps. Persons interested in the American trade dispute the accuracy of certain allegations made in this connection, and it is proposed that witnesses from the United States shall be allowed to state their own case. In addition, the manufacturers of lamps and the wholesale and retail oil dealers have important points still to explain. The Committee will therefore content itself this session with reporting the evidence and recommending its re-appointment next year.

THE NEW CONVEYOR CO., LTD.—We understand the contracts for the new workshops for the New Conveyor Co., Ltd., and Little and Graham, Limited, Smethwick, Birmingham, with 10, 6, 4, and 2 ton overhead travelling cranes, have been placed this week.

MESSRS BRYAN CORCORAN, LTD.—We learn that the business carried on by Mr. Bryan Corcoran, as a maker of grinding mills, &c., has been converted into a limited liability company. The business will be carried on as usual at same premises as heretofore, that is to say, at 31 Mark-lane, E.C., the workshops and warehouses being at Creek Church-lane, London.

Our Book Shelf.

Alkali, Etc., Works Regulation Act.—The 32nd annual report of the Chief Inspector, being his proceedings during the year 1895. 106 pp. London: Eyre and Spottiswoode. 1896. 8½d.

This is the first annual report of Mr. R Forbes Carpenter, who was appointed after the retirement of Mr. A. E. Fletcher, the previous Chief Inspector. The report has lost none of its interest to those interested in alkali, etc., works, and the statistics which are given in the first nine pages show the advantages to be gained by the systematic registration of all such works. It is satisfactory to find that no prosecutions have occurred during the year on account of excessive escapes of noxious vapours. It is true that nine prosecutions have been instituted, but they have all been for non-registration of existing works, seven of them being carbonising works in the woollen districts and two chemical manure works. The Chief Inspector points out the declining quantities of alkali manufactured by the Le Blanc process and the increasing quantities made by ammonia soda; and he also points out the competition, which seems to be inevitable from various other processes, upon which, however, he expresses no opinion as to their commercial stability. One thing comes singularly to the front, and that is that the attempt to minimise the nuisance arising from sulphuretted hydrogen by the treatment of alkali waste has resulted in a nuisance of another character. We allude to the residual gases of the Chance-Claus process, and it is hardly credible that in these days of economy so much as 10 to 15% of the sulphur still escapes and is lost. It would be very interesting to calculate how much the public has benefited by this attempt to minimise one evil by substituting another.

Under the heading of chlorine nothing new is brought forward when speaking of the older processes, but reference is made to the Ellerhausen process now being worked at Middlesbrough.

Something new in the rectification of sulphuric acid is to be found on pages 14 and 104, but the report seems to show that the processes there described are only yet incomplete, and that considerable additions and alterations will have to be effected before the inspectors are satisfied with the plant.

The inspector has much to say with reference to the conduct of sulphate of ammonia works and the suppression of nuisance arising from the evolution of sulphuretted hydrogen. Some analyses are given on page 17 showing the sulphur that exists as bi-sulphide of iron. It would be interesting to know how, in the presence of so many other sulphur compounds, 1½ % of this ingredient could be ascertained with certainty.

The statistical portion of the report is very interesting, and establishes a medium for reference of the highest class.

There are some things in the report described as new which come to us as old friends. The scrap iron towers used for absorbing sulphurous acid gas were worked at Macclesfield to our knowledge many, many years ago, and the Colson saturator, illustrated at page 63, together with the Bath saturator described on page 75, do not seem to differ very much, if at all, from the patent No. 19,089, taken out in 1890.

The reports of the district inspectors are given in great detail, and many of the suggestions to be found therein will prove exceedingly useful to those whose daily business it is to supervise chemical operations. It will be seen that in every manufacture the management must ever be in a state of ceaseless activity, and that the public is now protected as it never was before. The report shows how much useful work can be done by a central authority under which everyone inspected is treated alike. In this respect it contrasts very favourably with the methods employed for the suppression of other nuisances, looked after and inspected by local authorities, every one of which has a code differing from its neighbour, and endeavours to ameliorate the conditions by a series of petty prosecutions rather than by the appointment of men (who understand their business) to see that progress is made in the right direction and at as little cost as possible.

Personal. *Dr. J. Lewkowitsch*, F.I.C., F.C.S., consulting and analytical chemist, and chemical engineer, of Lancaster-avenue, Manchester, has for the convenience of his clients in the South opened offices at 35, Queen Victoria-street, London, E.C.

The Petroleum Trade of Siam.—The petroleum consumed in Siam was formerly supplied almost exclusively by the United States. The American article then went down before the Russian oil, and now the latter has to contend with the serious competition of the Langkat (Sumatra) product.

The New Dee Ironworks.—Messrs. John Sumner and Sons are rapidly approaching the completion of their extensive corrugated ironworks on the Dee at Queen's Ferry. Two of the great sheds are completed, and the largest portion of the machinery has been erected. A large stage is in process of construction on the Dee. Three vessels can be accommodated at the wharf at one time.

THE POSITION OF SODIUM NITRATE.

REVIEW OF THE PAST SIX MONTHS.

In reviewing the progress of nitrate of soda and its prospects for the ensuing half-year, Messrs. W. Montgomery and Co., give a very concise and practical summary of the position of this popular fertilizer. At the outset they point out that another record in consumption has to be registered for the season just closed. The year opened with the large visible supply of 662,000 tons, the low price of 7s. 7½d. per cwt., and the expectation of an increased demand for sugar-beet and cereal growing. In addition to this, a very early spring was experienced; indeed, we had no winter, and so the spring trade was begun with everything in favour of nitrate of soda being used upon a scale not previously experienced. The deliveries in January, February, and March amounted to 457,000 tons, showing an increase over the previous year of 142,000 tons. This increase, however, was not continued in the succeeding months, the deliveries for April-June amounting to only 234,000 tons, as compared with 325,000 tons in 1895. It was not expected that the consumption would be continued upon the scale of the opening months, but neither was so great a falling off generally anticipated. This falling away was not caused by any material advance in price, but by a combination of causes, amongst which we may mention (1) very dry weather, which is not conducive to the free use of nitrate; (2) keen competition at very low prices of sulphate of ammonia and other nitrogenous manures, the supplies of which this year have been much in excess of demand, and in England we must regretfully add that the terribly impecunious state of our farmers has had much also to do with the serious shrinkage in consumption which was experienced in April, May, and June. Values have not fluctuated much during the season. In January cargoes for spring arrival ranged from 7s. 6d. to 7s. 9d. per cwt., in February from 7s. 9d. to 8s. 1d. per cwt, in March-April from 8s. 1d. to 7s. 10½d. per cwt., and in May-June from 7s. 10½d. to 7s. 8¼d.; the close being steady at about 7s. 10d. per cwt. for arrived or due cargoes, with, however, not much interest being shown in the article.

The market for autumn and next spring arrival has been for several months under the influence of rumours of the combination, and latterly of actual signing of the said agreement, which is to restrict and regulate the supply of nitrate to the requirements of the world. The task which the producers have set themselves is a herculean one, especially when we consider the very diverse interests involved and the enormous producing power which has now been called into life by, in great measure, the action of the last combination, which caused prices to advance very largely, and so tempted the erection of other and larger works than then existed. In round figures, the producing power to-day is upwards of 45,000,000 quintals, whilst the minimum quantity fixed for the first year's shipment, under the present agreement, is 20,300,000 quintals, or 920,000 tons, a supply which is sufficient upon the basis of the past season's consumption until May 31st next, and still leave a stock at that date of upwards of 80,000 tons. The sacrifices which such a curtailment of production necessitates are very considerable, the increased cost per quintal in producing the lesser quantity being not insignificant, but the producers' calculation is that the whole of the difference will be made up to them by the extra price which will be obtainable from the consumer. The circumstances of the consumer have not changed for the better since the last combination was entered into; indeed, his power of resistance, both active and passive, to artificial restriction is greater than heretofore—passive by reason of his impecuniosity and active by reason of the greater supply of other nitrogenous fertilisers which are forced upon him at, in many cases, 20% cheaper than nitrate of soda is at present prices, and in this competitive list Peruvian guano, until recently held for extreme figures, now plays an important part, so also must the Damaraland guano recently discovered. This deposit is said to be a large one, the guano itself is of a very excellent quality, and the price comparatively low. We must expect then, with such competition, to see nitrate of soda to some extent displaced. Agricultural depression in Europe has been a very marked and growing feature during the past few years, and so keenly is it, apparently, felt in the sugar-beet growing countries, that we find the Governments of these countries resorting to increased export bounties and increased taxes upon the consumers of sugar in order to afford relief, which relief can hardly be looked upon as being more than in the nature of a mere palliative, if even that, as it can never reach the root of the economic trouble. Under the influence of the combination proceedings, cargoes for summer sailings changed hands at 8s. 3d. per cwt, and for autumn sailings at 8s 6d. per cwt. These figures about represent the pretensions of holders to-day; but, pending developments, buyers are indifferent. These developments will be watched throughout the summer and autumn with more than usual interest. The demand for refined quality has been upon a steady scale throughout the season at from 7s. 11d. to 8s. 1½d. per cwt. The actual consumption in Europe for the half-year amounts to 691,000 tons, of which the Continent took 610,000 tons and

the United Kingdom 81,000 tons. This represents an increase of 9 per cent. on the Continent, the figures for the United Kingdom being the same as for last year. The consumption in the United States tends slowly to increase, the present rate being about 120,000 tons per annum. The consumption in Europe for the first six months of the past three years has been as follows :—

	1894. Tons.	1895. Tons.	1896. Tons.
Continent	503,000	559,000	610,000
United Kingdom.....	85,000	81,000	81,000
	588,000	640,000	691,000

The consumption of the world for the twelve months ended June 30, 1894, 1895, and 1896 has been :—

	1894. Tons.	1895. Tons.	1896. Tons.
Continent	734,000	805,500	840,500
United Kingdom	114,000	110,000	117,500
United States	100,000	100,000	120,000
	948,000	1,015,500	1,078,000
The shipments for the same periods have been.....	1,004,000	1,109,000	1,218,000

THE COAL CRISIS.

THE following circular has been issued by the Miners' Federation to the district branches :—" Miners' Federation of Great Britain. Board of Conciliation.—Informal meeting held at the Westminster Palace Hotel June 24, 1896. After much discussion, the following offers were made by the coalowners' and the miners' representatives :—

"Coalowners' Offers.—'That the Conciliation Board be continued for one year from the 1st August, on condition (1) that an immediate reduction of 10 per cent. be conceded by the workmen off the 30 per cent. now upon the prices of 1888 rates of wages; and (2) that the matter be reopened at the end of July, 1897.'

" Miners' Representatives' Offers.—'That the Board be continued two years, that wages remain as they are now for the next 17 months, and that no advance be asked for during that period, but during the last seven months of the two years the workmen be at liberty to ask for an advance in wages.'

" Notice.—Each district is hereby requested to consult its members on these two offers, as to whether one or the other be adopted ; and, further, for any other means of continuing the Board of Conciliation or not. This information must be supplied by the association through their representatives at a conference of the whole of the Federation to be held at the Westminster Palace Hotel, London, on Tuesday, July 7, 1896, at ten o'clock, to determine what action shall be taken by our portion of the Board, and to finally determine what shall be done if no settlement is arrived at. The next informal meeting of the Conciliation Board will be held at the Westminster Palace Hotel on Wednesday, July 8, 1896.

(Signed) "B. PICKARD, President.
"THOS. ASHTON, Secretary."

THE AFRICAN OIL MILLS.

THE recent visit of the members of the Liverpool Engineering Society to these mills, which are situated at Greenland-street, Liverpool, enabled us to obtain the following items of interest concerning these large oil mills

The site selected for the new building is that formerly occupied by the old Southern Hospital and St. Barnabas' Church. It will be remembered that the land in this locality slopes down to Chaloner-street, the main thoroughfare along the line of docks. The mill building is a fire-proof structure covering a space of 85 feet by 56 feet, and is a two-storey building. The roof is of one span. The presses are chiefly engaged in the expression of palm kernels and nuts. Palm nut kernels have been used in this country since 1861 in the production of kernel oil and feeding cakes. The oil hardens and whitens, and is a favourite in soap-making. The cake gives excellent results, and is extensively used for milch cows and pigs. Cocoanut cake has been made in England for about twenty-five years, and is a capital feeder. Ground nuts have not been crushed extensively in England owing to the irregular supply. This difficulty has now been overcome. The cake from these nuts contains 7 to 8 per cent. of oil or fat-forming material, 45 to 50 per cent. of albuminoids (flesh-forming material), including about 7 per cent. nitrogen, 20 to 25 per cent. mucilage, etc., and not more than 9 to 11 per cent. of woody fibre and mineral matter. It has a sweet and agreeable flavour, and is readily taken to by stock. It is a recognised fact that the manure of cake-fed cattle is of considerably greater value than the ordinary farm-fed animal, and this is a point not to be lost sight of. The nuts are conveyed from shoots in the warehouse on to a band conveyor running under the floor of the court-yard, about eight feet below the basement floor of the warehouse. This band delivers them into the boot of the mill elevator, which raises them to the top floor of the mill. They are then conveyed by band and discharged into any of the hoppers or store bins over the various machines in which they are first treated. When palm kernels and copra are treated they pass into cleaning machines provided with magnetic separating apparatus for intercepting nails and other iron. The nuts are then screened, and when cleared of dust, small stones, etc., pass over another magnetic segmator. The cleaned kernels then pass automatically into machinery which reduces them to a suitable size for transport in bucket elevators, prior to raising the material to a large centrifugal dressing machine, which separates the coarse from the fine, returning the former to the reducing machine, while the fine particles pass through two sets of Anglo-American seed rollers. The rolled material is next raised by a bucket elevator and delivered by means of a conveyor into a steam-jacketed meal-heating kettle. It is then delivered to three " Leeds " hydraulic presses, each of the presses being provided with a cake-forming and measuring appliance. The cakes from the presses are then broken up by large edge-runners, weighing over eight tons each. The meal is next raised to another centrifugal dressing machine, which returns the coarse material to the edge-runners and forwards the fine to a set of rolls similar to those already mentioned. The rolled meal is raised by a bucket elevator again, and delivered into an Anglo-American steam-jacketed heating kettle, the cooked meal passing to an automatic cake-moulding machine, which enables one man to supply the eight hydraulic presses. These presses each make 18 cakes (about 30 inches by 14) at one pressing. The cakes are then treated by a double edge-paring machine. The parings are conveyed away by a worm to a small pair of edge-runners, and automatically returned to the heating kettle. The three " Leeds " presses, the eight Anglo-American presses, and the automatic moulding machine are worked from two sets of quadruple hydraulic pumps, working at a pressure of about 600 lbs. A pressure of 800 tons is exerted on each press, being between two and three tons per square inch. Two large accumulators are provided in the power house for working the presses. The oil is conveyed to the store tanks by means of pumps, the storage capacity being 500 tons. The engines are of the horizontal coupled compound non-condensing type, developing 360 i.h.p., with an initial steam pressure of 160 lbs. per square inch, making 80 revolutions. The cylinders are 18½ and 30 inches respectively, with a stroke of 42 inches. Steam is supplied by two steel Lancashire boilers. The engines and boilers are sufficiently powerful to drive double the quantity of machinery now in position, and space is also reserved for that expected development. Messrs. Henry Pooley and Son, Limited, have equipped the works throughout with weighing machines.

HINTS ON COMPOSTING MANURES.

FARM-MADE manures are best prepared for effective use by composting—that is, by a thorough rotting process well known to the practical farmer. To prevent the loss of ammonia as the manure is being accumulated, gypsum is sprinkled over the voidings in the stables, and it is also mingled with the manure heap as well. The principle is that the gypsum (sulphate of lime) gives up its sulphuric acid to the ammonia, thus forming sulphate of ammonia, which is stable, and suffers little loss. If such provision were not made, the ammonia would suffer much loss from volatilisation. There is one disadvantage in the use of gypsum in this way : the phosphates in the manure are apt to take very insoluble and unavailing forms. The carbonate of lime formed by the decomposition of the gypsum reacts with any soluble phosphate present with the formation of tri-calcium phosphate, practically the same thing as untreated South Carolina rock phosphate.

A better method of treating composts and manures generally would be to use low grade sulphate of potash, or kainit, in the place of gypsum ; the ammonia would be preserved equally well, and the agricultural value of the phosphates suffer no loss. In fact, the phosphates would have a better form than before, if there be any material difference. Phosphate of potash is, perhaps, the best possible form of these minerals for agricultural purposes, and such reactions as could occur with the use of potash salts must take this form. But this is not the only advantage ; farm manures are uniformly deficient in potash as compared with ammonia. The use of potash salts in the compost makes a far better manure, not only in balancing the ingredients, but also in holding its potash and phosphoric acid in such form as to be readily available in the soil.—*Mark Lane Express.*

Parliamentary Jottings.

SUCCESSFUL PROGRESS OF THE MOTOR CAR BILL.

In the House of Commons on Tuesday, Mr. Chaplin, in moving the second reading of the Locomotives on Highways Bill, said its object was to facilitate and encourage the construction and use of what were called in the Bill light locomotives. This was done with the view of affording the public a convenient and cheap mode of progression and transport, which was largely availed of now on the Continent and in America. In this matter there was no doubt we were greatly behind other countries, while he believed all the patents for the locomotives of this kind were in the hands of foreigners. The object of the Bill was to remove the reproach under which we suffered. He thought the Bill had for its object one in which all parties could sympathise. The Bill described a light locomotive as a vehicle propelled by mechanical power, which was to emit no smoke, and was not to draw more than one vehicle—the two weighing unladen under four tons. The existing laws forbade the use of these vehicles at present, except under very onerous conditions, but the present Bill removed those conditions, and provided that a light locomotive should be taken to be a carriage within the meaning of any Act of Parliament or local order made under an Act. They were also to be subject to section 26 of the Highways and Locomotive Act of 1878. Section 3 of the Bill provided that the Local Government Board should be empowered to make regulations with respect to the use of light locomotives on the highways, any breach of the regulations being subject to a fine. They would also deal with the question of carrying lights, &c. As they were dealing with an entirely new question, he would be perfectly ready to receive and consider any suggestions on the subject. He believed the measure was calculated to be very useful, and if carried into law would probably give great satisfaction in various quarters. If passed this session, he believed it would develop a very great and—having regard to an experience with respect to bicycles—possibly an enormous trade, and give a vast amount of employment in the country. (Cheers.) He believed it was even possible that motor cars might become the rivals of the light railways. ("Hear, hear," and laughter.) They might tend to decrease railway fares, and he was convinced they would be a great advantage and a boon to the agricultural interest, and would enable farmers to transport their produce at a much cheaper rate than at present. The Bill would undoubtedly be a great benefit to the public at large, and if the House would read it a second time he would move that it be referred to the Standing Committee on Law.

Dr. Tanner said the machines cost about £250. each, and were bound to break down in a fortnight. (Laughter.)

Mr. H. Owen agreed that some such Bill as the present was absolutely necessary, but he did not think that regulations made by the Board of Trade would meet the difficulties which would arise in the case.

Mr. Hobhouse congratulated the Government on introducing this Bill.

Mr. Daly opposed the second reading, because it proposed to leave the regulation of the use of these locomotives in the hands of the Local Government Board.

Mr. Luttrell approved of the Bill, but complained that it gave power to too many authorities.

Mr. Biddulph Martin thought the House should encourage as much as it could the use of these cars.

Mr. Mundella said that unless Parliament was prepared to maintain the prohibition in the use and manufacture of these vehicles in England they must pass a Bill of this kind. (Ministerial cheers.) He presided over the Petroleum Committee, and it was quite clear that the regulations which existed for the sale and use of petroleum spirit in this country were such that, even without the use of petroleum as a motive power, it was of the utmost importance they should at once pass a Bill giving some power of regulation. We had handicapped ourselves by legislation too much already, and that was the reason we were so much behind in regard to electricity and the telephone. He had seen these auto-cars working with the greatest facility and freedom from accident in the south and west of France. He believed there was in the future a vast industry in auto-motor cars, and the least we ought to do was to give it a fair chance. If it was to have a fair chance the regulation of it must not be in different departments; there must be one uniform system of regulation. (Ministerial cheers.) And he hoped members would not attempt to make it statutory what the width of the wheels or the pace should be; this should be made elastic so that the regulations might be changed or adapted according to the development of the invention.

The Bill was then read a second time, and referred to the Standing Committee on Law.

The Recovery of Cyanides.—Subject to satisfactory conditions being entered into, new plant for the recovery of cyanogen is about to be tried at the Huddersfield Corporation Gas Works. The patentees *have offered to put down* the plant at their own cost.

HYDROGEN SULPHIDE AND CARBON DIOXIDE IN GAS LIQUOR.

TWO handy and technically accurate methods for estimating these gases have been described by Mr. H. L. Greville in an article communicated to the "Journal of Gas Lighting." The article embodies certain modifications in the author's well known ammoniacal copper sulphate method for hydrogen sulphide. He says:—It may seem (to use a somewhat vulgar vernacular) a mongrel plan to employ a combination of the gram and grain system; but with regard to the estimation of impurities in gas liquor I have pursued this course for some considerable time. The transition is simple. Taking one volume of liquor, neutralised by an equal volume of 10% sulphuric acid, divided into 16 parts, each is equal to 1 oz. (so-called) strength. I have had specially made small graduated flasks, holding 64 c.c. as a measure of the liquor to be tested. Working with this measure, and a 50 c.c. burette, charged with standard 10 per cent. acid, 4 c.c. of acid equals 1 oz. strength; and each cubic centimetre therefore equals ¼ oz. As each cubic centimetre is divided into tenths, and with methyl orange as an indicator, *versus* the old system of employing litmus paper, a degree of accuracy can be obtained far in excess of that attainable under the older system.

Turning from this digression to the main object of the present article, and taking the question of the determination of sulphuretted hydrogen first, I prefer to prepare my standard copper solution from metallic copper, in preference to employing copper sulphate as previously recommended. A convenient strength for ordinary work may be prepared as follows: 46·7 grains of clean metallic copper, in the form of thin foil or wire, are dissolved in a slight excess of nitric acid, being careful to prevent loss from sputting. When the metal is entirely dissolved, dilute with a small quantity of water, and add such an excess of liquid ammonia that the precipitate at first formed is perfectly dissolved with the formation of a clear blue solution. Then dilute with distilled water, until the volume is half a litre (500 cubic centimetres). This will give a solution of which each cubic centimetre equals 0·05 grain of sulphuretted hydrogen.

The *modus operandi* is then as follows: A 25 cubic centimetre burette is filled with the standard copper solution. Then 100 grains measure of the liquor to be tested is carefully measured, into a white porcelain basin, diluting with a little distilled water, and adding a small proportion of strong ammonia. Now run in the copper solution at first drop by drop, stirring vigorously, and noting the first appearance of a slight brown tint. Record how much copper solution has been used up to this point; and then run in more boldly, still stirring constantly. The solution will remain brown and turbid until the critical point is reached, when black copper sulphide will separate in heavy particles and rapidly settle down, leaving a colourless supernatant liquid. If too much copper solution has been added, the supernatant liquid will have a slight blue tint, and a second test should be made; but with a little experience in manipulation, this will be found unnecessary in ordinary cases.

I have made experiments as to possible errors arising from such normal constituents of gas liquors as sulphocyanides, hyposulphites, and cyanides. The two former have no effect; but the presence of cyanides certainly does influence the test. This source of error is, however, practically remedied by deducting from the total volume of the copper solution used the amount necessary to produce the first slight brown colouration, and calculating the proportion of H_2S on the difference. The percentage of H_2S in the sample is, of course, obtained (with 100 grains of liquor) by multiplying the number of cubic centimetres of solution used by 0·05. As an example, 100 grains measure of a sample of scrubber liquor, required a total of 6·6 of copper solution; but 0·8 was needed before the first indication of a brown colouration. The amount of copper solution, therefore, to be credited to H_2S was 5·8, and $5{\cdot}8 \times {\cdot}05 = 0{\cdot}29$ of H_2S per cent. This sample gave, by the ordinary precipitation process by arsenic solution, and weighing as As_2S_3 0·28 per cent. of H_2S.

Adopting the same lines of procedure with other samples, the following results were obtained:—

	H_2S by Volumetric Process.	H_2S by Precipitation as As_2S_3.
Condenser liquor	1·180	1·200
Scrubber	0·470	0·450
Do., check test	0·475	0·450
Scrubber	0·680	0·690
Condenser	0·410	0·390
Unnamed	0·107	0·106
Well liquor	0·607	0·600
Weak scrubber liquor	0·081	0·079

The test can be made in a few minutes.

The method for carbon dioxide is very familiar in principle, but manipulation is somewhat varied and possesses the advantage of extreme simplicity. The only accurate test solution necessary is ordinary 10 per cent. acid in use for the estimation of the stren

gas liquors. Beyond this, all that is required is a solution of ordinary calcium chloride, of an approximate strength of about 9 per cent. This may be easily prepared by dissolving half a pound of ordinary dry calcium chloride in some distilled water in a flask, and, as the solution is generally faintly alkaline, adding carefully some very dilute hydrochloric acid, until the liquid gives a neutral reaction. Dilute then to the volume of half a gallon, and filter into an ordinary Winchester quart.

The process depends on the fact that, whereas the ordinary 10 per cent. acid is an indicator of all compounds of ammonia in gas liquor capable of being decomposed by its action, the addition to the liquor of an excess of calcium chloride decomposes the ammonium carbonate present, precipitating calcium carbonate, and fixing the ammonia previously in combination with CO_2 as neutral ammonium chloride. The precipitated calcium carbonate being removed by filtration, the alkalinity of the filtrate is determined with 10 per cent. acid; and the loss of alkalinity is a measure of the proportion of CO_2 present. The reaction which occurs may be expressed thus:

$$(NH_4)_2CO_3 + CaCl_2 = CaCO_3 + 2NH_4Cl.$$

The mode of procedure is as follows: Take, say, 1,000 grains measure of the liquor to be tested, pour into a white porcelain basin, and (using methyl orange as an indicator) find how many cubic centimetres of 10 per cent. acid are required for neutralisation. Having noted this, measure 2,000 grains of the liquor into a stoppered decigallon measure, and add 2,000 grains measure of the calcium chloride solution. Shake vigorously at intervals; and, after a brief period, the calcium carbonate will settle rapidly down as a dense precipitate. Pour the comparatively clear liquid on to a dry filter paper, filtering into a graduated measure; and when 2,000 grains measure have been obtained, pour this amount into a white porcelain basin, and determine the alkalinity with 10 per cent. acid as before.

The calculation is then simple. Sulphuric and carbonic acids are both what is termed "dibasic;" replacing equivalent proportions of the same alkali in combination. The molecular weight of H_2SO_4, being 98, and that of CO_2, being 44, these figures represent the equivalency of the two acids with regard to the same base. With standard H_2SO_4 of 10 per cent. strength, 1 c.c. of 15·433 grains would contain 1·5433 grains of H_2SO_4—equal to 0·693 grains of CO_2 As an example, say that 1,000 grains of the raw liquor required 40 c.c. of 10 per cent. acid for neutralisation, and an equal quantity (1,000 grains) of the filtered liquor, after treatment with $CaCl_2$, required for neutralisation 20 c.c. of test acid. Then $40 - 20 = 20$ c.c. difference; and $0{\cdot}693 \times 20 = 13{\cdot}86$ of CO_2, equal to 1·386 per cent.

The following experiments demonstrate the accuracy of the process. The figures, showing determination by weight in comparison to the volumetric method, were made by washing and weighing the precipitated calcium carbonate, and then calculating the CO_2.

	CO_2 per cent. Volumetric Process.	CO_2 per cent. Gravimetric Process.
Condenser liquor	2 020	1·950
Scrubber ,, ...	1·800	1·840
,, ,, ...	0·664	0·677
,, ,, ...	0·680	0·690
Unnamed ,, ...	0 977	0·951
Surface condenser	0·762	0·763
Well liquor	1 630	1·640
Scrubber	0·069	0·074

The determinations of H_2S and CO_2 can be made easily in 15 minutes; the proportion of H_2S being estimated while the mixture of $CaCl_2$ and liquor is standing before filtration.

With regard to ratio of CO_2 and H_2S per cent. by weight and volume, it may be stated that at 30 inches B, and 60° Fahr.—

1 per cent. $H_2S = 1{\cdot}11$ cubic feet per gallon.
1 per cent. $CO_2 = 0{\cdot}8526$,, ,, ,, ,,

By multiplying these factors by the weight percentages, the corresponding volumes in cubic feet per gallon may be obtained.

SMOKE UNNECESSARY IN MANUFACTURING TOWNS.—Speaking at the annual meeting of the Steam Users' Association in Manchester last week, Mr. Adam Dugdale (Blackburn), who presided, stated in regard to the subject of smoke prevention that the report recently issued by the Committee appointed by the Manchester and Salford Association for the abatement of noxious vapours strongly confirmed the position the Steam Users' Association had taken up. The Committee were of opinion that a manufacturing district might be free from manufacturing smoke. With this opinion the Association agreed, and their engineer would at all times be prepared to advise members as to the best means of preventing smoke without the adoption of very expensive or complicated apparatus. A subsequent speaker, Mr. T. Parkinson, also said he was satisfied that with care manufacturing smoke could be greatly reduced, if not altogether prevented.

Trade Notes

SALT UNION DEBENTURES.—Warrants for the half-year's interest on the debenture stocks of the Salt Union, Limited, have been posted.

ALLOTMENT OF SHARES IN THE NEW BORAX CO.—Letters of allotment have been posted in the Pacific Borax and Redwood's Chemical Works, Limited.

A NEW NITRATE CO.—Another company in connection with nitrate has been offering shares for subscription this week. The title of the company is the Salar del Carmen Nitrate Syndicate, Limited.

MESSRS. BLAGDEN AND WAUGH.—We learn that after July 1st, Mr. W. G. Blagden, of 4, Fenchurch-avenue, E.C., will enter the service of the Gas Light and Coke Co., and will continue his business at the above address on behalf of this company. His son, Mr. Victor Blagden, has joined in partnership with Mr. Walter Waugh, who for 20 years has been connected with the business of Mr Blagden, sen. Under the title of Messrs Blagden, Waugh, and Co., this firm will carry on the business of chemical merchants, their offices after the first of this month being at 50 and 51, Lime street, E.C

FROM OIL TO STEEL.—It is reported from the United States that Mr. J. D. Rockefeller, the great magnate of the Standard Oil Company, is about to erect the largest blast furnace and steel works plant at Cleveland, Ohio. Some years ago he bought the Mesaba iron mines in the Lake Superior district, and since then has had built ten of the largest-sized freight boats for conveying the ore to Cleveland. If the report is true he will now build gigantic works, snap his fingers at the existing steel pool, and roll his millions over and over until his "pile" is twice as big as it is now. Even now Americans credit him with the possession of from £30,000,000. to £40,000,000. sterling.

CENTRAL CYCLONE CO., LTD.—We noticed when at the Royal Show at Leicester that the Central Cylone Co., Ltd, of 343, Cable-street, London, had by far the best exhibit of grinding machines. Their pulverizers still hold first place for fine grinding mills, and as they save largely in labour, we are informed that several of the leading firms in this country and abroad have secured a monopoly for their use, while others are working under royalty. The cost of reduction is so largely reduced that it pays firms who have big outputs to make such arrangements, and thus be in a position to undersell their competitors. The Cyclone Disintegrators exhibited show no new feature, as they are so well established that it is doubtless not an easy matter to improve upon them. The class 5 mill shown by this Company is the largest type of this mill ever constructed, and will grind many tons per hour.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols remain unaltered. Crude carbolic acid is steady at 2s. 3d. for 60%, and 40% crystals at 7d. Crude naphtha is quoted 10d., while solvent is firm at 1s. 4d. Anthracene quiet: 30% A 10¼d., and B 8½d. Creosote unaltered. Pitch nominally 32s. to 32s. 6d., f.o.b. East Coast.

Sulphate of ammonia is steady. The close of the month was characterised by a better demand, but the increase was not sufficient to affect prices, which remain: London outside makes £8. 2s. 6d., Liverpool £8. 2s. 6d., Hull and Leith £8. Buyers for forward are very scarce, and quite indifferent to offers that are decidedly tempting.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there are no changes of consequence to report in values. Business on the whole is rather slack, especially in bleaching powder, which is quoted for spot delivery £6. 15s., f.o.r., makers' works, and for export trade £6. 5s. to £7., according to destination. Alkali is without change, and caustic soda stands as for some time past, viz., f.o.b., Liverpool, 77%, £9. 7s. 6d; 74%, £8. 7s. 6d.; 70%, £7. 7s. 6d.; 60%, £6 7s. 6d. net, 10 ton lots and upwards. Chlorate of soda slightly easier at 5⅞d. Potash 4½d. per lb. Sulphur continues firm at the advance. Saltcake in better request at 22s. 6d., f.o.r., works, Lancashire. Sulphate of copper lower at £16. 15s., f.o.b. Acetate of lime, brown, unchanged, at £4. 2s. 6d. to £4. 5s., c.i.f.; grey, firm at the advance. Other acetates are without any special movement or change in value. Carbonate of potash dearer at £17. 10s. to £17s. 15s., net, c.i.f. Caustic potash is without alteration in price. Yellow prussiate of potash rather firmer at 6¾d. to 7d. Cyanide 1s. 1½d. per lb. Sulphocyanides quiet and without change. Arsenic continues firm at £22. 15s to £23., Garston, for spot delivery. Forward sales are being made at slightly lower prices Nitrate of soda 7s. 9d. to 8s. per cwt., according to quality.

REPORT ON MANURE MATERIAL.

During the week the market has remained quiet, and business done has only been on a moderate scale. In 75/80% Florida phosphate rock there have been several transactions to the Baltic at 6¼d. per unit, and there would be further buyers at the price for 1897, steamer shipment, but raisers are not anxious to sell far ahead at so unremunerative a price. The quotation, c i f., to good United Kingdom port is 6d per unit, but no business is reported at the price. South Carolina river rock offers freely at 5d. per unit without attracting attention. The quotations for kiln-dried Algerian phosphate are, for 58/63% 5¼d., and for 63/70% 5½d. per unit, in cargoes, c i.f., to good United Kingdom ports. For autumn shipment sellers talk of £3. 17s 6d. per ton for cargoes of River Plate bones, but this is considerably above buyers' idea of value, and no transactions have been effected. Bombay bone meal, near at hand, may be had at £3 15s. per ton, ordinary quality, but for autumn shipment £3. 17s. 6d. to £4. per ton is required, according to quality. £4. per ton is still asked for crushed Kurrachee bones for shipment, but buyers will not pay the price. Nitrate of soda is quiet at 7s. 9d. for fine, and 7s. 7½d. for ordinary quality.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron, firm: Scotch warrants closed at 45s. 11½d.; Middlesbrough, 37s. cash, and hematite, 46s. 11d. Copper, firm: Chili bars, G.O.B.'s and G.M.B's., closed at £49. 3s 9d. to £49. 8s. 9d. cash, and £49. 7s. 6d. to £49. 12s. 6d. three months. Tin, steady: Straits closed at £61. to £61. 10s. cash, and £61. 12s. 6d. to £62. 2s. 6d. three months; Australian, £62. 5s. English ingots, £64. 10s. Lead, steady: Spanish, £11. 1s. 3d. English, £11. 3s. 9d.; Silesian spelter, ordinary, £18. 2s. 6d. Nickel, 1s. 2½d. Antimony, £30. Quicksilver: First hands, £6 10s; second hands, £6. 8s. 6d. *Copper shares*, firm: Cape, 2 1/32 to 2 3/32; Copiapo, 2 1/32 to 2 1/16; Libiola, 2 7/16 to 3 3/8; Mason and Barry, 3¼ to 3½; Rio Tinto, 24 5/16 to 24 7/16; Tharsis, 5 7/8 to 6 1/8.

GLASGOW, Wednesday.—Market steady, with small business. Scotch done at 45s. 11d. and 45s. 11½d. cash, also at 46s. 1d. one month; closing with buyers at 45s 11½d. cash, sellers ask 46s. Cleveland closes with buyers at 37s. cash; sellers ask 37s. 1d. Cumberland hematite done at 46s. 11d. cash, also at 47s. 1½d. one month; closing with buyers at 46s. 11d. cash, sellers ask 46s. 11½d. Middlesbrough hematite closes with buyers at 44s. 3d. cash, sellers ask 44s. 4½d.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—Business continues very quiet. The principal imports into Hull, up to date, have been—compared during the same period a year ago: Linseed, 385,476 quarters against 286,138 quarters; Rapeseed, 58,146 quarters against 77,811 quarters; Cottonseed, 93,084 tons against 98,997 tons; Olive oil, 12,205 casks against 6,724 casks; Rape oil, 2,105 casks against 4,971 casks; Oilcakes, 8,484 tons against 8,011 tons; Tallow, 32,694 cwts. against 7,070 cwts; Bones for manure purposes, 3,828 tons against 2,021 tons; Turpentine, 6,331 barrels against 8,860 barrels. Linseed oil is quiet at 16s. 9d. per cwt. naked spot; July-August, 17s.; September-December, 17s. 3d.; and January-April, 17s. 4½d. to 17s. 6d.; refined and boiled, £1. to £2. per ton extra. Export for the week has been 2,040 cwts. Refined cotton oil remains quiet at 14s. 1½d naked spot; July-August, 14s 3d. to 14s. 4½d.; and November-April, 14s. 9d. to 15s.; crude on the spot is worth 12s. 9d.; casks £1. and ordinary barrels 30s. per ton extra. Export of refined oil for the week has been 3,820 cwts. Turpentine, 20s. 6d. per cwt. Olive oil unchanged. Castor oil remains firm and unchanged. Cod oil, £17. to £19. per ton. A very large consignment of herring oil lies here seeking a market at about £13. 10s. per ton. Boiled siccative oil, £12. per ton. Brown wool grease, £8. per ton. Locomotive grease, £10. 10s. per ton. Blomless mineral oil, from £7. 15s. per ton.

CAKES.—Linseed cakes slow; 95% pure, £5. 5s. to £5. 7s. 6d. per ton. Oilcakes, £4. 12s 6d; Americans, £4. 17s. 6d.; Russians, £5 5s per ton. Cotton cakes, quiet sale: best makes, £3. 15s. to £3. 17s. 6d. per ton.; seconds, £3. 12s. 6d. Rape cakes, unaltered.

PAINTS.—Business continues brisk, and very little interfered with for stocktaking. White and red leads unchanged. Oxide of zinc from £22 10s. per ton. Dry mineral colours, £3. 10s to £8 Ultramarines, 3d. to 8d. per lb. Ready mixed paints, from £24. per ton, in lever tins. Paint remover, 25s per cwt. Black, blue, red oxide, venetian red, Brunswick green, and yellow ochre paints from £11. per ton. Imperial Black varnish, £5. 10s. per ton in barrels. Oak varnish from 5s. 6d. per gallon.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is very quiet. Prices remain firm, but, with the exception of a little hand-to-mouth business, there is nothing doing. Olive keeps very steady, and values are well maintained. Linseed is quietly steady, Liverpool makes in export casks being quoted 18s. 6d. to 19s. 6d. per cwt., according to quality. There is practically no change in the position of cottonseed, Liverpool refined being steady at 16s. 3d. to 17s. per cwt., and American dull, at 16s. 6d. per cwt. Castor oil is a very firm market. Good seconds Calcutta are quoted 3d., and there are small sales at the figure. First pressure French firm at 2 5/8d., and Madras 2 5/8d. to 2 11/16d. per lb. spot. Tallow is only in moderate request, prices being unaltered. Resin is satisfactory as far as common is concerned, there being a fairly good demand at full prices, but for medium and fine there is but a feeble inquiry. Spirits of turpentine are steady at the reduction, 20s. 3d. now being spot price. Petroleum quiet at 6¼d. to 7½d. for American, and 5¾d. per gallon for Russian refined.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

TYNE CHEMICAL REPORT.

Tuesday.

In chemicals there is very little new to report; business is only quiet. Sulphur scarcer, and is now quoted at £3. 17s. 6d. to £4. per ton. Caustic, 76/77%, £9. 5s. to £9 10s. per ton. Soda crystals, £2 2s. 6d. per ton, gross weight locally.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s., per ton, nett; recovered sulphur, 2 cwt. bags, £4. per ton, nett; soda ash, 48%, £4. 10s. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; alkali, 36%, £2. 15s. per ton, nett; white alkali, 48%, £4. 10s. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 15s. per ton, nett; do., 100° Tw., £3. 2s. 6d. per ton, nett; do., 140° Tw., £3. 10s. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95%, crude calcined, £6. per ton, nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. per ton, f.o.b., Tees.

COALS.—Market practically remains without alteration, though as supplies are more plentiful, prices are perhaps a shade easier. Best Northumbrian steam, 8s. 3d. to 8s. 6d. per ton; second qualities, steam, 7s. 3d. to 7s. 6d. per ton; small steam, 3s. 6d. to 3s. 9d. per ton; gas coals, 6s. 3d. to 6s. 6d. per ton; bunker coals, unscreened, 6s. 6d. to 6s. 9d.; coke firm, 15s. to 15. 6d. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

The market is about where it has been for some time, and that is rather too quiet to be satisfactory. Scotch dyeing and calico printing have fallen upon a very slack time owing to various causes (one of them the extreme lowness of the offers made), and in consequence most of the works are on broken time. Prices of dyeing materials, however, hold position fairly well, and in the case of aniline salt there is a well-maintained rising movement. Caustic sodas are a little easier. The rest of the common chemicals are unchanged, and still rather slow of demand. Sulphate of ammonia has been doing a little better, and towards the close of the week £8. 1s. 3d. was paid for prompt. There is no movement whatever forward as yet. Prices in the mineral oil and paraffin section are unchanged. Paraffin spirit will be advanced a half-penny at the end of August, to hold so over the winter, if makers continue the existing understanding. Light gravity lubricating oils are easier, but the high grades are firm and in good request.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. 10s. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett,

Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s. 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 17s. 6d. nett, Tyne; saltcake, 23s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 10s., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 9d. to 8s.; sulphate of ammonia, £8. to £8 1s. 3d prompt, f.o.b., Leith; sal-ammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £18. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2 3/16d. to 2¼d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 6,600 bags beet unrefined, and 500 bags beet refined.

New Companies.

Dennistoun Salt Company, Ltd—CAPITAL, £2,500 in £1. shares. This company has been formed in Edinburgh to mine and manufacture salt, and to develop a new brine evaporating pan.

Major and Co., Ltd.—CAPITAL, £50,000., in shares of £5. each, of which 4,000 are deferred. This company has been formed to acquire the business of the late J. C. Major at Wolverhampton and Hull, and to manufacture and render marketable coke, coal, tar, pitch, gas liquor, and other bye products. The subscribers to the memorandum of association are:—J. L. Major, 7, Salisbury-street, Hull, chemical manufacturer; Mrs. B. Major, 7, Salisbury-street, Hull; Miss G. Major, The Rhylls, Wolverhampton; Mrs. E. Major, The Rhylls, Wolverhampton; W. T. Cox, Upper Villiers-street, Wolverhampton, manager; W. Major, Craigford, Weston-super Mare, gentleman; M. Curry, jun., Wyche-road, Malvern, engineer.

Pacific Borax and Redwood's Chemical Works, Ltd.—CAPITAL, £510,000. in £10. shares of which 20,000 are 6 per cent. cumulative preference. This company has been formed to enter into an agreement between F. M. Smith, R. C. Baker, and Redwood and Sons, to carry on the business of boracic acid, borate and borax manufacturers, miners and refiners, and chemical manufacturers. The subscribers to the memorandum of association are:—G. W. Redwood, Belvedere, Kent, manufacturer; R. C. Baker, Belvedere, Kent, manufacturer; B. Parker, St. Michael's Rectory, Cornhill, solicitor; W. A. Browne, 308, Winchester House, E.C., C.A.; D. C. Wilson, Mawallock Lodge, Ealing, clerk; M. Holmes, 1, St. Charles' Sq., Notting Hill, merchant; H. W. Thomas, 144, Ebury-street, S.W., barrister.

Granitic Paint Co., Ltd.—CAPITAL, £5,000. in shares of £1. each. This company has been formed to adopt an agreement with C. J. Lee, and to carry on the business of oil, paint, and varnish manufacturers.

Barrow Salt Co., Ltd.—CAPITAL, £100,000., in shares of £5. each. This company has been formed to carry on the business of rock salt miners, brine owners, and white salt manufacturers at Walney Island, Barrow-in-Furness. The subscribers to the memorandum of association are:—H. Cook, Salthouse Villa, Barrow-in-Furness, secretary; J. Fisher, Fairfield, Barrow-in-Furness, shipowner; J. A. Forster, Crosslands Park, Barrow-in-Furness, chartered accountant; W. McCowan, Moresby, Whitehaven, ironmaster; M. Kennedy, Hill Foot, Ulveston, ironmaster; A. H. Strongitharm, Barrow-in-Furness, engineer; E. Wadham, Millwood, Dalton-in-Furness, engineer.

Pegamoid, Ltd.—CAPITAL, £300,000., in £1. shares of which 1,000 are deferred. This company has been formed to promote the use of pegamoid in all its varied applications, as a substitute for fabrics, paper, paints, &c. The subscribers to the memorandum of association are:—D. F. Goddard, M.P., Oak Hill, Ipswich; J. Paddon, Suffolk House, E.C., merchant; G. D. Peters, 39, Moorfields, E.C., contractor; J. Irvine, 254, Gray's Inn-road, W.C., engineer; J. G. Smith, 34, Castle-street, Liverpool, merchant; J. F. Butterworth, Birch Lawn, Withington, Manchester, gentleman; R. H. Harper, Nutfield, Weybridge, merchant.

Westphalite Explosives and Ammunition Co., Ltd.—CAPITAL, £150,000. in shares of £1. each. This company has been formed to manufacture and sell ammunition, dynamite, and armaments. The subscribers to the memorandum of association are:—J. H. Milward, 188, Fleet-street, E.C., solicitor; St. J. B. Roscoe, 5, Portland-road, Birmingham, solicitor; W. Tonks, Butley Dene, Cavendish-road, Birmingham, accountant; J. H. Breakwell, 38, Avenue-road, King's Heath, agent; T. H. Willday, 158, Albert-road, Aston, agent; J. W. Smith, 115, Newton-road, Sparkhill, accountant; T. F. Pountney, 49, Bowyer-road, Saltley, stationer.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

F. BERGER and G. KAHLER, tallow, oil and chemical merchants, importers and exporters, Mark Lane, E.C., under the style of Berger, Kahler and Co.

C. A. COLLINS, R. THOMAS, G. P. GOULD, and F. W. FINCH, drysalters and dyewood merchants, Bristol and Keynsham, under the style of Gould, Thomas and Co., so far as regards G. P. Gould and F. W. Finch.

BANKRUPTCY ACTS, 1883 and 1890.

Receiving Order.

PÜTZ, HELEN (trading as F. J. Pütz and Co.), Great St. Helens, E.C., and Grove-road, Willesden Green, N.W., chemical and general merchants.

Adjudication.

OPENSHAW, WILLIAM, trading as The Holt Town Rubber Co., and W. H. OPENSHAW, Manchester, rubber manufacturer.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 20th.

Acetic Acid—		
Holland,	50 pks.	R. W. Greeff & Co.
,,	20	H. Wallace & Co.
,,	10	A. & M. Zimmermann
Alkali—		
France,	40 c.	Spies Brs.
Germany,	110	J. Barber & Co.
France,	40	,,
Alum—		
Holland,	185 cks.	Ohlenschlager Brs.
Ammonium Nitrate—		
Germany,	44 cks.	Petri Brs.
Antimony Ore—		
Portugal,	20 t.	J. Bamber
Straits,	26	R. & J. Henderson
Arsenic—		
France,	20 cks.	T. H. Lee
,,	15	A. Carey
Germany,	5	Brit. Anti-Fouling C. Co.
Asbestos—		
Canada,	£989	J. Owen
Germany,	98	Craven & Co.
France,	100	Girard Frs. & Co.
Barium Chlorate—		
Holland,	24 cks.	S. Devon Wf. Co.
Barytes—		
Holland,	21 cks.	O'Hara & Hoar
,,	24	H. B. Alder & Co.
,,	94	G. Rahn & Co.
Belgium,	178	J. L. Lyon & Co.
Holland,	110	T. & W. Farmiloe
,,	185	W. Harrison & Co.
Bromide of Iron—		
Germany,	5 cks.	A. & M. Zimmermann
Bromine—		
Germany,	50 cs.	A. & M. Zimmermann
Camphor—		
Germany,	4 brls.	L. & I. D. Jt. Co.
Japan,	165 tubs	R. Warner & Co.
,,	265	Brown & Elmslie
Germany,	70 200 cs.	R. Warner & Co.
Caoutchouc—		
Madagascar,	9 c.	W. M. Smith & Sons
Germany,	128	T. H. Lee
Zanzibar,	36	L. & I. D. Jt. Co.
,,	2	Clarke & Smith
Singapore,	25	Anderson, Weber & Co.
Madagascar,	44	L. & I. D. Jt. Co.
Ceylon,	32	Major & Field
Singapore,	414	E. Boustead & Co.
,,	100	Williams, Torrey & Co.
Germany,	2	Craven & Co.
,,	1	Stiebel Brs.
,,	30	L. & I. D. Jt. Co.
,,	77	Forbes, Forbes & Co.
Madagascar,	9	Lewis & Peat
Rangoon,	134	Prop. Hay's Wf.
Zanzibar,	2	Hale & Son
Madagascar,	8	S. Figgis & Co.
Sydney,	53	McIlwraith & Co.
Germany,	35	Wallace Brs.
,,	17	Prop. Bull Wf.
,,	4	Clarke & Smith
,,	10	S. Figgis & Co.
,,	106	Anderson, Weber & Co.
Madagascar,	59	Procter Brs.
,,	27	Kleinwort, Sons & Co.
Castor Oil—		
France,	20 cs.	Anderson, Weber & Co.
E. Indies,	87 cks.	Cayzer, Irvine & Co.
,,	39	Ross & Deering
France,	3	W. G. Frith & Co
,,	20 brls.	Lucas & Spencer's Wf., Ld.
,,	20 pks.	F. Boehm
Chemicals *(otherwise undes.)*—		
Belgium,	£25	H. Lorenz
Germany,	10	Findlay, Durham & Co.
Holland,	773	T. H. Lee
Belgium,	47	Société John Cockerill
Germany,	93	T. H. Lee
,,	16	Phillips & Graves
,,	450	A. & M. Zimmermann
U. States,	590	E. E. Bailes
,,	1,230	C. Lock
Citrate of Lime—		
Italy,	22 cks.	W. C. Bacon & Co.
Cream of Tartar—		
France,	2 cks.	B. & F. Wf. Co.
,,	3	Ross & Deering
,,	2	McNamara & Co.
Spain,	5	W. C. Bacon & Co.
France,	27	
Spain,	16	B. & F. Wf. Co.
Portugal,	5	,,
Dextrine—		
Germany,	30 bgs.	M. D. Co.
,,	190	J. Barber & Co.

Dyestuffs—
Argols
Italy, 371 bgs. B. Jacou & Sons
" 350 Thames S. Tug & L. Co.
Cutch
Rangoon, 250 bxs. G. S. N. Co.
Germany, 100 Brown & Elmslie
Rangoon, 200 Phillipps & Graves
" 489 H. A. Litchfield & Co.
Singapore, 100 J. Jones
Rangoon, 250 Leach & Co.
" 1,000 T. Simpson
Divi Divi
Ceylon, 47 bgs. L. & I. D. Jt. Co.
E. Indies, 312 Walker, Munsie & Co.
" 49 Culverwell, Brooks & Co
Extracts
Germany, 300 bls. J. Knill & Co
Denmark, 1 cs. Sorensen & Co.
Germany 200 bgs. T. H. Lee
France, 2 cks. "
Rockhampton, 81 R. J. Francis & Co.
Holland, 11 brls. R Baelz & Co.
Denmark, 20 cs. McDougall & Bonthron
France, 110 pks. Bennett S. S. Co.
Germany, 200 A. J. Humphery
U. States, 480 brls. L. & I. D. Jt. Co.
Austria, 200 cks. A. J. Humphery
Gambier
Singapore, 520 bgs. Beresford & Co.
" 79 R. & J. Henderson
" 49 W. France & Co.
Indigo
E. Indies, 6 chts. A. Frey & Co.
" 107 L. & I. D. Jt. Co
" 14 Binny & Co.
" 19 Elkan & Co.
" 2 Lewis & Peat
" 34 Cayzer, Irvine & Co.
" 20 J. Owen
" 30 R. von Glehn & Son
" 9 P. Macfadyen & Co.
" 20 J. Jones
" 7 Schonlank, Engel & Co.
Logwood
B. Guiana, 140 t. Colonial Co
Myrabolams
E. Indies, 2,000 pkts. P. & O. S. N. Co.
" 1,366 bgs. J. Allen & Co.
" 1,000 Montgomerie & Co.
Orchella
France, 50 bls. L. & I. D. Jt. Co.
Germany, 76 Prop. Bull Wf.
Shumac
Italy, 28 pks. Nichlan's Whvs, Ltd.
Tanners' Bark
Adelaide, 116 t. A. & W. Nesbitt
" 31 Union L. Co.
Natal, 45 Brown & Elmslie
Melbourne, 62 "
Natal, 159 bgs. A. & W. Nesbitt
Adelaide, 388 t. Baxter & Hoare
Natal, 52 A. J. Humphery
Turmeric
E. Indies, 218 bgs. J. P. Alpe & Co.

Farina—
Holland, 50 bgs. J. Knill & Co.
" 75 T. H. Lee
" 75 J. Barber & Co
Germany, 100 E. & T. Pink
" 50 M. D. Co.

Glucose—
U. States, 200 pks. 200 c. Fellows, Morton & Co.
Germany, 40 394 c. Bennett S. S. Co.
" 100 100 J. Frank Ohlmann
" 25 198 R. G. Hall & Co.
U. States, 50 300 C. Southwell & Co.
" 250 250 Trier, Meyer & Co.
" 50 285 L. Norman & Co., Ld.
" 748 748 Pearce, Pelly & Co.
" 100 582 E. & T. Pink
" 250 1,426 Union Ltge Co.
Germany, 15 120 M. D. Co.
U. States, 200 1,160 Soundy & Sons
" 1,050 5,800 Bellamy & Co.
" 100 580 Deering & Robottom
" 100 570 J. T. Morton
Germany, 13 105 J. Knill & Co.
" 200 200 Trier, Meyer & Co
France, 200 200 L. Norman & Co.
U. States, 50 300 G. Clark & Sons
" 1,250 3,625 R. G. Hall & Co.

Glue—
——, £882 ——

Guano—
Chili, 3,405 t. Anglo-Contl. G. Wks.

Litharge—
Germany, 3 cks. Petri Brs.

Lithopone—
Holland, 40 cks. D. Storer & Sons

Magnesia—
Belgium, 5 cks. Hore & Scrivener

Manganese—
Germany, 88 t. C. Hof & Co

Manure—
Madeira. 5 t. L. & I. D. Jt. Co.
Rockha'pton, 19 Anning & Cobb
E. Indies, 10 Couper & Co.
Rangoon, 18 Fox, Roy, & Co.

Methyl Alcohol—
Belgium, 7 dms. H. Lorenz
" 18 Lister & Biggs
Germany, 15 Stein Brs.

Mica—
E. Indies, £120 Schenker & Co.
" 365 L. & I. D. Jt. Co.
" 328 A. B. Curtis & Co.
Madras, 39 Ross & Deering
U. States, 35 W. M. Smith & Sons
Madras, 1,348 "
" 200 Schenker & Co.
U. States, 80 C. Ward
Ceylon, 150 F. Barnes & Co.

Naphtha—
Belgium, 7 dms. J. Harrison

Nitre—
Chili, 17,466 pks. W. Montgomery & Co.

Ochre—
France, 80 cks. T. Cartwright
Holland, 5 7 cs. Phillipps & Graves
U. States, 25 brls. Taylor Brs.
Spain, 53 cks Silicate Paint Co.
France, 68 brls. Taylor Brs.
" 80 cks. C. F. Gerhardt
" 21 N. & R. Collyer
" 205 W. Harrison & Co.

Phosphate Rock—
France, 258 t. A. Hunter & Co.
Belgium, 148 Lawes Chemical Wks.
" 20 H. & E. Albert

Pitch—
N. Russia, 117 brls. Fellows, Morton, & Co.
" 177 cks. M. D. Co.
U. States, 34 brls. G. Smith

Plumbago—
Germany, 19 cks. J. Thredder, Son, & Co.
Ceylon, 351 "
" 37 Cayzer, Irvine & Co
" 69 brls. R. G. Hall & Co.
Germany, 150 cs. E. & T. Pink
Ceylon, 41 cks. Anderson, Weber, & Co.

Potassium Bicarbonate—
Holland, 30 c.A. & M. Zimmermann
France, 80 Macintosh & Co.

Potassium Carbonate—
France, 40 c. Mackintosh & Co.
" 150 W. E. Cole

Potassium Chloride—
Bluff, 1 ck. Nat. M. & A. Co.

Potassium Cyanide—
Holland, 50 cs. P. Heydemann

Potassium Nitrate—
Holland, 20 cks. Phillipps & Graves

Potassium Sulphate—
France, 150 bgs. W. E. Cole

Pyrites—
Spain, 2,800 t. C. Tennant, Sons, & Co.
" 600 Anderson, Anderson, & Co.

Quicksilver—
N. Russia, 308 btls. L. & I. D. Jt. Co.

Saltpetre—
E. Indies, 162 bgs. The African Co.
Germany, 40 cks. Union L. Co.

Sheep Dip—
Bluff, 74 pks. Welch, Perrin, & Co.

Soda—
Holland, 1,880 c. R. Waters
Belgium, 431 J. Jones
France, 62 Prop. Hay's Wf.

Sodium Acetate—
France, 32 cks. H. Lorenz

Sodium Hyposulphite—
Holland, 100 c. F. C. Devon & Co.

Sodium Nitrate—
Holland, 7 cks. Phillipps & Graves
" 4 Anderson, Weber, & Co.

Starch—
Germany, 1 ck. L. & I. D. Jt. Co.
Holland, 1,425 cs. Little & Johnston
Belgium, 114 A. Brown
" 100 J. Harrison
" 40 Taylor Brs
Holland, 185 Phillipps & Graves
Germany, 86 "
Belgium, 20 T. Ronaldson & Co.
France, 8 brls. Beck & Pollitzer
Belgium, 778 cs. Sawer, Sons, & Co.
" 52 T. H. Lee
" 200 Hore & Scrivener
" 60 Leach & Co.
" 950 J. Jones

Stearine—
N. Zealand, 3 cks. J. Graves
France, 295 bgs. W. E. Cole
" 80 Walbaum & Tosetti
" 20 J. Goddard & Co.

Sulphur—
Italy, 8 t. C. Tennant, Sons, & Co.
" 10 P. Hecker & Co.
" 25 F. C. Devon & Co.
" 20 A. Zumbeck & Co.
" 20 Soundy & Sons
" 10 J. Kitchin, Ltd.
" 96 G. Boor & Co

Talc—
France, £80 G. G. Blackwell, Sons, & Co.

Tartaric Acid—
Germany, 37 pks. Schenker & Co.
Holland, 4 F. C. Devon & Co.
" 50 Kirkpatrick & Co.

Ultramarine—
Belgium, 3 cks. Taylor Brs.
Holland, 6 "
" 8 pks. Haeffner, Hilpert, & Co.
Germany, 24 cks. T. Hamilton
Holland, 40 pks. Thames S. T. & L. Co., Ltd.
" 1 G. Rahn & Co.
" 3 Hernu, Peron, & Co.
Belgium, 5 Leach & Co.
" 20 cks. H. Kohnstamm
Holland, 4 W. Harrison & Co.

Varnish—
U. States, 138 pks. Pinchin, Johnson, & Co.
France, 3 Flageollet & Co.
" 16 Suter, Hartman & Co.
Belgium, 1 pk. Becker & Wagner

Vermilion—
Hong Kong, 35 cs. City Coml. Wf., Ld.
" 10 Blundell, Spence, & Co.

White Lead—
Germany, 28 cks. F. G. Clifford
" 37 D. Storer & Sons
Belgium, 18 J. L. Lyon & Co.

Wood Pulp—
Belgium, 1,234 pks. E. J. & W. Goldsmith
Holland, 270 Phillipps & Graves
Sweden, 37 Thames S. T. & L. Co.
" 180 Moreton Cox Brs.
Holland, 593 "
Germany, 31 M. H. Voss
" 50 Tough & Henderson
" 163 bls. C. Herrlich
Sweden, 320 W. G. Taylor & Co

Zinc Oxide—
Germany, 500 cks. Soundy & Sons
" 50 brls. M. Ashby, Ltd.
" 40 W. Balchin
Holland, 100 M. Ashby, Ltd.
Germany, 50 D. Storer & Sons

LIVERPOOL.

Week ending June 18th.

Alum Cake—
Rotterdam, 65 cks.

Antimony—
Antofagasta, 300 bgs.

Barytes—
Rotterdam, 67 cks.
Antwerp, 50 bgs.

Boracic Acid—
Leghorn, 40 cks.

Borate of Lime—
New York, 2,516 bgs. Balfour Williamson

Borax—
Valparaiso, 3,315 sks.

Castor Oil—
Calcutta, 250 cs.
Madras, 100

Colours—
Rotterdam, 4 cks.
Antwerp, 7
Ghent, 4 brls. J. T. Fletcher & Co.

Cottonseed Oil—
New York, 100 brls.

Cream of Tartar—
Bordeaux, 22 cks.
Barcelona, 5 Sachse & Klemm

Dyestuffs—
Argols
Bordeaux, 4 cks.
Cochineal
Las Palmas, 4 bgs. Canary Islands Trading Co.
Cutch
Singapore, 450 bxs.
Extracts
New York, 60 bxs. E. & M. Schweich
" 16 cks.
Ghent, 25 J. T. Fletcher & Co.
Fustic
Carthagena, U.S.C., 858 ps. G. H. Muller & Co.
Gambier
Singapore, 692 bgs. 1,243 bls.
Logwood
Belize, 338 t.
Myrabolams
Bombay, 1,354 bgs. E. D. Sassoon & Co.
Orchella
Guayaquil, 68 bls.
Valparaiso, 37 Frankfurter & Co
" 49
Saffron
Valencia, 2 cs.
Shumac
Palermo, 540 bgs.
Turmeric
Calcutta, 9 bls.

Glucose—
Boston, 50 brls.
Hamburg, 104 cks.
Baltimore, 50
New York, 700

Glue—
Rotterdam, 17 brls.

Guano—
Huanillos, 1,360 t.

Iodine—
Valparaiso, 55 brls. A. Gibbs & Sons
" 23

Lead Acetate—
Stettin, 14 cks.

Limestone—
Antwerp, 4 cs. J. T. Fletcher & Co.

Manganese Ore—
Coquimbo, 1,650 t. Wigan Coal & Iron Co.
Poti, 2,050 Darwen & Mostyn Iron Co.

Nitrate—
Iquique, 7,777 sks. Duncan, Fox & Co.

Oxalic Acid—
Rotterdam, 6 cks.

Paint—
Boston, 50 cs. M. Nicol & Co.

Paraffin Scale—
New York, 623 brls. Thompson & Bedford

Pitch—
Hamburg, 7 brls.

Potash—
Valparaiso, 20 sks. J. M. Gildemeister
Hamburg, 160 cks.
Montreal, 10 brls. Mendelsohn & Co.

Pyrites—
Huelva, 3,113 t. Matheson & Co.
Rosin—
Bahia, 34 sks.
Saltpetre—
Hamburg, 4 cks. 30 kgs.
Calcutta, 1,201 bgs. King, Bailie & Co.
" 185
Soap—
Leghorn, 250 bxs. Weaver & Sterry
" 218 120 cs.
New York, 1 W. Cuthbertson
Baltimore, 100 brls.
Hamburg, 1 kg.
Soapstone—
Bordeaux, 200 bgs. G. G. Blackwell, Sons & Co.
Sodium Nitrate—
Iquique, 954 bgs. Balfour Williamson
Starch—
New York, 100 bgs.
Newport News, 110 brls.
Boston, 20 J. Armstrong & Co.
" 300
Baltimore, 400 sks.
Rotterdam, 174 cs.
Antwerp, 955 J. T. Fletcher & Co.
" 246
Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co.
" 38
Sulphur—
Catania, 200 t. 250 bgs. 64 cks.
Sulphur Ore—
Huelva, 1,754 t. Matheson & Co.
Tallow—
Boston, 158 tcs. Stolterfoht, Sons & Co.
Campana, 173
New York, 125 hds.
Boston, 153 120
Philadelphia, 162
Tannic Acid—
Hamburg, 4 cks.
Tartar—
Bordeaux, 2 cs.
Tartaric Acid—
Rotterdam, 3 cks.
Treacle—
Bordeaux, 6 bdls.
Boston, 42 pks. Maple Syrup Co.
Rotterdam. 2 cks.
Philadelphia, 25 brls.
Varnish—
New York, 11 brls. W. A. Warrin
" 2 1 cs.
Verdigris—
Bordeaux, 3 cks.
Wood Pulp—
Fredrikshald, 2,915 bls. H. Tyrer & Co.
Drammen, 5,190 Becker & Co.
Boston, 80
Baltimore, 300 rolls
Rotterdam, 203
Montreal, 414 bdls.
Oporto, 490 Ciana Wood Pulp Co.
Zinc Oxide—
New York, 20 brls.
Antwerp, 8
Zinc White—
Rotterdam, 50 cks.
Hamburg, 40

MANCHESTER.

Week ending June 20th.

Albumen—
Paris, 4 cs.
Alumina Sulphate—
Rotterdam, 29 cks.
Aluminous Cake—
Rotterdam, 91 cks.
Aniline Oil—
Rotterdam, 2 cks.
Antimony—
Boulogne, 2 cks.
Barium Sulphate—
Rotterdam, 13 cks.
Barytes—
Antwerp, 3 bgs.
Bone Ash—
Rio Grande Do Sul, 228 t. J. Gordon & Co.
Chemicals *(otherwise undescribed)*
Rouen, 22 cks.
New York, 20
Colours—
Boulogne, 2 cks.
Paris, 2
Hamburg, 3 5 cs.
Rotterdam, 48 29 26 brls. 2 bxs.
Creosote Salt—
Rotterdam, 4 cks.
Dyestuffs—
Alizarine
Rotterdam, 109 cks.
Fustic
San Juan Del Sur, 460 t. D. Midgley & Sons
Logwood
Laguna, 400 t.
Farina—
Hamburg, 125 bgs.
Glucose—
New York, 100 brls.
Glue—
Rotterdam, 2 cs.
Rouen, 46 cks. 45 bls.
Hamburg, 5 bskts.
Treport, 1 36
Lead Acetate—
Rotterdam, 31 cks.
Limestone—
Antwerp, 5 crts. 2 cs. 8 pks.
Lithopone—
Rotterdam, 8 cks.
Oxalic Acid—
Rotterdam, 30 cks.
Paraffin Scale—
New York, 900 brls. Anglo-American Oil Co., Ld.
Soda—
Rotterdam, 20 brls.
Starch—
New York, 1,000 bgs.
Hamburg, 20 cks.
Ghent, 83 cs. J. T. Fletcher & Co.
" 20
Antwerp, 240
Rotterdam, 85
Stearine—
Antwerp, 6 bgs.
Tallow—
New York, 50 hds. Co-op. W'sale Society
Tartar—
Hamburg, 14 cks.
Tartaric Acid—
Rotterdam, 12 cks.
Tin Perchloride—
Antwerp, 2 cks.
Wood Pulp—
Hamburg, 40 bls.
Christiania, 666 W. H. Ingram
Drammen. 2,950 "
Christiania, 500
Skien, 2,200
Zinc Oxide—
Hamburg, 10 cks.
New York, 100 brls.

HULL.

Week ending June 20th.

Acids—
Bari, 10 cks.
Asbestos—
Genoa, 28 cs.
Hamburg, 1 ble. Wilson, Sons, & Co., Ld.
Barytes—
Rotterdam, 43 cks. W. & C. L. Ringrose
Bremen, 18 G. Holmes & Co.
" 42
Antwerp, 150 Bailey & Leetham
" 200 bgs.
Rotterdam, 24 Hutchinson & Son
Caoutchouc—
Bari, 1 cs. Wilson, Sons, & Co., Ld.
Castor Oil—
Trieste, 13 cs. Wilson, Sons, & Co., Ld.
Leghorn, 15 "
Genoa, 10 "
Chemicals *(otherwise undescribed)*
Hamburg, 41 cks. Wilson, Sons, & Co., Ld.
Danzig, 17
Stettin, 3 "
Bremen, 1 kg. Veltmann & Co.
Hamburg, 1 cs. "
Dunkirk, 316 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 37 cks. W. & C. L. Ringrose
Hamburg, 2 cs. Bailey & Leetham
Cod Oil—
Aalesund, 30 brls. Wilson, Sons, & Co., Ld.
Bergen, 50 "
Colours—
Trieste, 39 cks.
Rotterdam, 7 cs. Hutchinson & Son
Stettin, 1 ck. Wilson, Sons, & Co., Ld
Antwerp, 11 "
" 6 21 pks.
Rotterdam, 49 26 cs. W. & C. L.
17 brls. 11 bxs. Ringrose
Dextrine—
Stettin, 150 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 13 cks. W. & C. L. Ringrose
Argols
Bordeaux, 94 bgs. Rawson & Robinson
Leghorn, 1 ck.
Indigo
Kurrachee, 213 cs. Wilson, Sons, & Co., Ld.
Logwood
Hamburg, 2,921 pcs. Wilson, Sons, & Co , Ld.
Myrabolams
Bombay, 13,348 bgs.
Shumac
Palermo, 1,256 Wilson, Sons. & Co , Ld.
Marseilles, 15 bls. "
Limassol, 837
Farina—
Hamburg, 20 bgs. Wilson, Sons, & Co., Ld.
Stettin, 48 "
Ghent, 27 367 pks. "
Harlingen, 250 Hutchinson & Son
Glucose—
Rotterdam, 50 bgs. Hutchinson & Son
Stettin, 411 Wilson, Sons, & Co., Ld.
" 24 cks.
New York, 1,000 brls.
Glue—
Antwerp, 5 cks. Bailey & Leetham
Dunkirk, 69 Wilson, Sons, & Co., Ld.
Hydrofluoric Acid—
Hamburg, 1 cs. Bailey & Leetham
Lime—
New York, 2,990 bgs. Wilson, Sons, & Co., Ld.
Manure—
Stavanger, 113 bgs. Wilson, Sons, & Co., Ld.
Ochre—
Marseilles, 35 cks. Wilson, Sons, & Co., Ld.
Paint—
New York, 60 pks. 2 cs. Wilson, Sons, & Co., Ld.
Phosphate—
Bona, 500 t.
Ghent, 80 Wilson, Sons, & Co., Ld.
Pitch—
Hamburg, 20 brls.
Pumice Stone—
Trieste, 5 bls. Wilson, Sons, & Co., Ld.
Messina, 180 pks. "
" 15 cks.
Leghorn, 106 pks. "
Pyrites—
Huelva, 852 t.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
Naples, 104 cs. Wilson, Sons, & Co., Ld.
Marseilles, 43 "
Starch—
Amsterdam, 40 cs. Hutchinson & Son
Bremen, 1,946 Veltmann & Co.
Antwerp, 40 Furley & Co.
Amsterdam, 80 W. & C. L. Ringrose
Talc—
Leghorn, 200 bgs. Wilson, Sons, & Co., Ld.
Tallow—
New York, 150 tcs. 25 hds. Wilson, Sons, & Co., Ld.
Dunkirk, 45 cks. "
Tartar—
Bordeaux, 5 cks. Rawson & Robinson
Naples, 2 Wilson, Sons, & Co., Ld.
Marseilles, 2
Tartaric Acid—
Rotterdam, 2 cks. W. & C. L. Ringrose
Treacle—
New York, 700 brls. Wilson, Sons, & Co., Ld.
Ultramarine—
Bremen, 12 cks.
Rotterdam, 16 Hutchinson & Son
Varnish—
Antwerp, 1 cs. Wilson, Sons, & Co., Ld.
Waste Salt—
Hamburg, 20 t.
White Lead—
Rotterdam, 82 cks. W. & C. L. Ringrose
" 20 Hutchinson & Son
Wood Pulp—
Drontheim, 80 bls. Wilson, Sons, & Co., Ld.
Bremen, 170 Veltmann & Co.
Helsingfors, 396 J. Good & Sons
Zinc White—
Rotterdam, 25 cks. W. & C. L. Ringrose

GLASGOW.

Week ending June 25th.

Acetate of Lime—
Philadelphia, 843 bgs.
Alumina Sulphate—
Rotterdam, 29 cks. J. Rankine & Son
Aniline—
Rotterdam, 4 cks. 6 cs. J. Rankine & Son
Asbestos—
Montreal, 3,169 bgs.
Barium Sulphate—
Antwerp, 550 bgs.
Barytes—
Hamburg, 100 bgs
Rotterdam, 147 cks. J. Rankine & Son
Castor Oil—
Antwerp, 29 cks.
Chemicals *(otherwise undescribed)*
Rotterdam 5 brls. J. Rankine & Son
Citric Acid—
Messina, 13 cs.
Cod Oil—
Harbour Grace, 259 cks. John Murray & Son
Colours—
Rotterdam, 41 pks. 22 brls. J. Rankine & Son
Antwerp, 9 cks.
Cottonseed Oil—
Baltimore, 100 brls.
Dried Blood—
Rouen, 10 cs.
Dyestuffs—
Alizarine
Rotterdam, 26 cks. 116 pks. J. Rankine & Son
Cutch
Rawson, 863 bxs.

Logwood
Bowling, 354 t. M'Arthur, Scott & Co.

French Chalk—
Trieste, 200 bgs. P. M Intosh & Son

Gelatine—
Hamburg, 1 cs.

Glucose—
Philadelphia, 543 brls.
Boston, 100
New York, 300

Glue—
Rouen, 11 cks. 33 bls. 40 cs.
Hamburg, 90 bgs.
Rotterdam, 10 J. Rankine & Son

Infusorial Earth—
Hamburg, 786 bgs.

Limestone—
Rouen, 1 crt.

Manganese Chlorate—
Rotterdam, 6 cks. J. Rankine & Son

Paint—
Montreal, 90 pks.

Paraffin Scale—
Philadelphia, 232 brls.

Potash—
Hamburg, 60 cks.
Rotterdam, 22 J. Rankine & Son

Potassium Carbonate—
Hamburg, 90 cks.

Potassium Chloride—
Hamburg, 179 bgs. Poynter, Sons & M'Donald

Pumice Stone—
Rotterdam, 3 cks. J. Rankine & Son

Rosin—
Savannah 377 brls. W. N. Gemmell & Co.
" 1,100 Sandeman Brs.
" 2,100 John Parker
" 2,810 Rowley & Dick
New York, 600

Soap—
Trieste, 71 cs.

Sodium Nitrate—
Rotterdam, 4 cks. J. Rankine & Son

Starch—
Trieste, 60 bgs.
Baltimore, 400
Amsterdam, 80 bss
Boston, 200 sks.
New York, 1,000 825
Antwerp, 60 pks. 30 40 cs.
Rotterdam, 23 cs. J. Rankine & Son

Stearine—
Rotterdam, 14 cks. J. Rankine & Son

Tartar—
Bordeaux, 23 cks.

Treacle—
Montreal, 1 cs.

Turpentine—
Savannah, 2,000 cks. John Parker
" 1,650 brls. Rowley & Dick

Ultramarine—
Rotterdam, 2 cks. J. Rankine & Son

Varnish—
New York, 100 brls.
Antwerp, 1 cs.

Waste Salt—
Hamburg, 270 cks. & a qty.

White Lead—
Rotterdam, 80 cks. J. Rankine & Son

Wood Pulp—
Trieste, 204 bls.
Hamburg, 100
Christiania, 420 1,168 bndls.

Zinc Ashes—
Antwerp, 1 ck.

Zinc Oxide—
Antwerp, 25 cks.

Zinc White—
Rotterdam, 60 cks. J. Rankine & Son

TYNE.

Week ending June 20th.

Alum Earth—
Hamburg, 84 cks. Tyne S. S. Co

Barium Carbonate—
Rotterdam, 301 bgs. Tyne S. S. Co

Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co

Barytes—
Rotterdam, 66 cks. Tyne S. S. Co.

Colours—
Rotterdam, 10 brls. Tyne S. S. Co.
Hamburg, 1 cs. "

Glucose—
New York, 150 brls. Furness, Withy, & Co.

Limestone—
Antwerp, 6 crts. 6 cs. Tyne S. S. Co.

Soap—
Rotterdam, 8 cs. Tyne S. S. Co.

Starch—
Rotterdam, 110 cs. Tyne S. S. Co.
Antwerp, 130 "

Sulphur—
Christiania, 177 bgs.

Tar—
Hamburg, 1 dm.

White Lead—
Antwerp, 11 cks. Tyne S. S. Co.

Wood Pulp—
Christiania, 1,000 bls.

Zinc Oxide—
Rotterdam, 25 cks. Tyne S. S. Co.
Antwerp, 10 brls. "

Zinc Sulphate—
Gothenburg, 30 cs.

GOOLE.

Week ending June 24th.

Alizarine—
Rotterdam, 9 cks.

Alkali—
Dunkirk 3 cks.

Barytes—
Rotterdam, 12 cks.

Caoutchouc—
Boulogne, 3 cks.

Chemicals *(otherwise undes.)—*
Hamburg, 7 cks.

Coal Tar Dyes—
Rotterdam, 56 cks. 15 cs.

Dyestuffs—
Rouen, 10 bls.
Boulogne, 30 cks. 2 cs. 42 pks.
Rotterdam, 78 19

Glucose—
Hamburg, 20 cks.

Madder—
Rotterdam, 2 cks.

Potash—
Hamburg, 58 dms.
Dunkirk, 38

Sodium Silicate—
Rotterdam., 1 ck.

Waste Salt—
Hamburg, 707 cks. 140 t.

GRIMSBY.

Week ending June 27th.

Caoutchouc—
Rotterdam, 36 cs.
Hamburg, 4

Chemicals *(otherwise undescribed)*
Rotterdam, 20 pks.
Hamburg, 1 ck. 2 cs.
Antwerp 6

Coal Tar Dyes—
Hamburg, 66 cks.
Antwerp, 74 pks.

Dyes—
Antwerp, 15 pks.

Plumbago—
Hamburg, 1 ck.

Salt—
Hamburg, 950 bgs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 24th.

Acids—
Bombay, 2 cs. £18

Ammonia—
Townsville, 12 btls. £103
New York, 1 t. 2 c. 65
Algoa Bay, 10 14

Ammonia (Liquid)—
Uerdingen, 37 drs. £400
Bombay, 6 cs. 92

Ammonium Chloride—
Odessa, 8 cks. £51
Sydney, 8 46
Varna, 1 t. 7 c. 45
Bourgas, 9 15
Constantinople 4 13 153
Bilbao, 3 21

Ammonium Nitrate—
Bilbao, 66 cks. £294

Ammonium Sulphate—
Amsterdam, 36 t. £361
Ostend, 25 203
Hamburg, 208 1,755
Mauritius, 55 19 c. 300
Auckland, 2 17

Anhydrous Ammonia—
Cologne, 24 cylders. £ 20
Dusseldorf, 15 140
Napier, 21 115
Hamburg, 10 43

Bisulphite of Lime—
Cape Town, 1 t. 1 c. £13
Bombay, 2 13 33

Bleaching Powder—
Natal, 1 t. £11

Bones—
Antwerp, 20 t. £140

Carbolic Acid—
Antwerp, 8 cs. 2 cks. £16
Colombo, 6 23
Marseilles, 70 140
Dusseldorf, 80 536
Algoa Bay, 2 11
Rotterdam, 150 604
Timaru, 120 dms. 5 70
Cologne, 91 415
Newport News, 16 24

Carbon Bisulphide—
M. Video, 77 drs. £45

Carbonic Acid Gas—
Jersey, 27 tubes £10

Caustic Soda—
Christchurch, 8 t. 12 c. £64
Philadelphia, 58 1 425
Demerara, 11 6
Algoa Bay, 2 14 67
E. London, 19 21
Sydney, 12 6 164
Wellington, 5 1 37

Chemicals *(otherwise undescribed)*
Fremantle, 5 c. £35
Port Stanley, 2 cs. 10
Lisbon, 4 15
Calcutta, 11 64
Bombay, 10 39
Karachi, 3 13
Lyttelton, 1 ck. 5 31
Perth, 9 kgs 1 41
Rotterdam, 2 t. 12 33
Dunkirk, 15 600
Adelaide, 12 pks. 31
Bombay, 2 19
Vaile, 1 2 45

Citric Acid—
Copenhagen, 1 t. 10 c. £132
New York, 1 5 170
Liban, 20 kgs. 127
Brisbane, 2 25
Cape Town, 2 cs. 13
Genoa, 10 64
Kurrachee, 2 13
Rotterdam, 10 kgs. 63
Algoa Bay, 2 15

Coal Products—
Alizarine
Barcelona, 10 cks. £275
Montreal, 5 72
New York, 25 304

Aniline Oil
Ghent, 4 cks. £60
Philadelphia, 12 drs. 450

Aniline Salts
New York, 36 cks. £250

Anthracene
Rotterdam, 55 cks. £270

Benzol
Ghent, 25 brls. £75
Amsterdam, 7 drs. 67
Rotterdam, 138 cks. 802

Creosote
New York, 500 cks. £220

Naphtha
Melbourne, 50 crates £55
Boca, 19 drs. 11
Treport, 30 cks. 50
Boulogne, 26 67
Lyttelton, 20 50

Naphthaline
Treport, 10 cks. 90 bgs. £64
Stettin, 2 19

Paraffin Wax
Mogador, 5 cs. £10

Pitch
Helsingfors, 150 t. £251
Hochfeld, 135 209
New York, 522 bgs. 1,000 cks. 662
Antwerp, 800 t. 1,480
Boston, 500 brls. 220
Alexandria, 400 146
Newport News, 500 bgs. 475 534

Tar
Colombo, 25 runlts. 10 brls. £30
Helsingfors, 1,000 cks. 575
New York, 10 puns. 5
Algoa Bay, 329 drs. 56
Cologne, 250 140
Natal, 300 50

Toluol
Rotterdam, 50 cks. £200
Boulogne, 30 84

Coal Products *(otherwise undes.)*—
Sourabaya, 35 brls. £17
Singapore, 20 drs. 18

Copper Sulphate—
Lisbon, 25 t. £412
Algoa Bay, 18 c. 14
Bordeaux, 192 3,765
Treport, 10 170
Paris, 58 1,198

Cream of Tartar—
Sydney, 1 t. £100
Dunedin, 5 c. 87
Fremantle, 2 kgs. 11

Disinfectants—
Melbourne, 13 t. 1 c. £410
Shanghai, 100 dms. 200
Sydney, 6 23 pks. 55
Cape Town, 20 cs. 1,000 drs. 320 414
Fremantle, 3 15
Bombay, 13 5 c. 111
Hamburg, 25 50 cks. 373

Hypophosphites—
New York, 31 cs. £510

Manure—
Lyttelton, 25 t 10 c. £80
Timaru, 305 200
Santos, 20 190
Antigua, 4 36
Las Palmas, 20 4 100
Natal, 3 10 42
Riga 101 6 225
Motril, 131 2 310
Salobrena, 269 9 1,875

Oxalic Acid—
Auckland, 5 c. £12

Potash—
Wellington, 19 c. £47

Potash Crystals—
Oporto, 5 cs. 1 c. £33

Potash Salts—
Delagoa Bay, 22 t. 12 c. £2,173

Potassium Bichromate—
Calcutta, 2 t. 10 c. £112

Potassium Chlorate—
Cape Town, 1 t. £30

Potassium Cyanide—
New York, 50 cs. £373
Fremantle, 13 c. 80
Singapore, 18 cks. 252
Potassium Prussiate—
Hamburg 2 cks. £42
Saltpetre—
Bahia, 2 t. 15 c. £65
Rockhampton, 1 1 23
Rio, 18 23
Gibraltar, 10 235
Wellington, 1 23
Sheep Dip—
B. Ayres, 44 t. 13 c. £1,010
Algoa Bay, 500 drs. 125
Odessa, 150 cs. 375
Cape Town, 100 dms. 22
Melbourne, 100 cks. 200 200
Lyttelton, 20 70 70
Soda—
Cape Town, 3 t. 6 c. £8
Soda Alkali—
Rotterdam, 4 t. 19 c. £32
Soda Crystals—
Algoa Bay, 12 t. 3 c. £22
Malta, 1 19 5
Fremantle, 2 5
Sodium Bicarbonate—
Trinidad, 1 t. £8
Algoa Bay, 2 21
Sodium Carbonate—
Singapore 7 c. £11
Sodium Hyposulphite—
Bombay, 20 kgs. £10
Sodium Tartrate—
Toronto, 12 c. £38
Sulphur—
Demerara, 18 c £7
Natal, 2 t. 10 12
Lyttelton, 20 70
M. Video, 4 16
Sulphuric Acid—
Penang. 4 t. 12 c £18
Demerara, 7 56
Algoa Bay, 8 5 65
Natal, 3 15 18
Superphosphates—
Timaru, 200 t. £530
Mauritius, 67 6 c. 1,225
Tartaric Acid—
Perth, 3 kgs. £16
Boulogne, 5 c. 35
Fremantle, 15 94
Algoa Bay, 10 65

LIVERPOOL.

Week ending June 24th.

Alkali Waste—
Antwerp, 5 t. 9 c. £14
Alum—
Havana, 8 t. 1 q. £20
Callao, 1 7 c. 2 7
B. Ayres, 1 1 2 5
Tripoli, 1 5 6
Beyrout, 2 10 10
Valencia, 1 1 6
Melbourne, 3 12 17
Sydney, 1 5
Smyrna, 7 7 2 41
Lisbon, 11 17 2 57
Bilbao, 13 18 3 60
Aluminous Cake—
Melbourne, 4 t. 6 c 1 q. £17
Calcutta, 10 10 46
Ammonium Carbonate—
Odessa, 10 c. £18
Barcelona, 1. 37
Lisbon, 1 5 39
Venice, 1 2 28
Toronto, 5 7
Havana. 12 2 q. 17
Ammonium Chloride—
Piræus, 9 c. 3 q. £17
Patras, 4 8
St. Petersburg, 5 t. 8 3 175
Trieste, 1 35
Constantinople, 8 3 13
B. Ayres, 12 21
Bombay, 1 5 44
Odessa, 1 35
Lisbon, 9 18
Bourgas. 12 11
Kustendjie, 6 15
Naples, 19 3 34
Mersyne, 13 22
Barcelona, 2 4 80
Ammonium Sulphate—
Cape Town, 4 t. 3 c. £35
Malaga, 50 5 408
Bilbao, 1 98
Teneriffe 10 10 90
Leghorn, 12 4 2 q. 99
Philadelphia 25 3 3 185
Valencia, 4 18 2 41
Barcelona, 10 9 83
Las Palmas, 169 16 1,414
New York, 102 4 1 230
Gd. Canary, 5 10 46
Barium Chlorate—
Lisbon, 2 c. £8
Barytes—
Rotterdam, 5 c. £20
Bleaching Powder—
Baltimore, 105 cks.
Boston, 420
Calcutta, 195 cs.
Cape Town, 40 bxs.
Ghent, 69
Lisbon, 40
Melbourne, 200
Naples, 17
Newport News, 71
New York 194
Norrkoping, 40
Oporto, 4
Philadelphia, 50
San Sebastian, 27
Callao, 2 t. 2 c. 3 q. £37
Boracic Acid—
Montreal, 1 t. 2 c. £33
Antwerp, 3 6 72
Adelaide, 1 37
Rotterdam, 2 1 q. 64
Borax—
Yokohama, 3 t. 9 c. £63
Vera Cruz, 10 10
Havana, 5 5
Brisbane, 5 5
Kustendjie, 1 10
Ibrail, 1 16 28
Hamburg, 35 14 3 q. 725
Antwerp, 2 4 1 47
Callao, 10 10
Montreal, 15 4 3 300
Adelaide. 10 11
Shanghai, 1 3 3 23
Victoria, B.C., 4 2 9
Stettin, 1 1 2 22
Rotterdam, 5 18 118
Genoa, 1 19 2 39
Seville, 2 40
Calcium—
Constantinople, 10 t. 1 c £24
Calcium Chloride—
New York, 10 t. 4 c. £21
Carbolic Acid—
Antwerp, 13 t. £260
Hong Kong, 5 c. 2 q. 9
Hamburg. 3 11
New York, 3 168
Bombay, 1 3 9
Alexandria, 4 3
Philadelphia, 10 15 225
Sydney, 8 3 13
Caustic Potash—
New York, 2 t 2 c. £70
Newport News, 4 6
Trinidad, 14 20
Adelaide, 3 4
Melbourne, 4 5 139
Sydney, 1 18 66
Caustic Soda—
Adelaide, 160 dms.
Alexandria, 66
Amsterdam, 155
Antwerp, 15 26 brls.
Aracaju, 35
Bahia 120
Baltimore, 295
Barcelona, 218
Bilbao, 50
Bombay, 100
Boston, 200
Brisbane, 56
B. Ayres, 150
Callao, 50
Cartagena, N.G., 22
Catania, 18
Ceara, 50
Corinto, 17
Corunna, 20
Fairwater, 170
Fiume, 125
Genoa, 90
Hamburg, 20
Havana, 15
La Guayra, 20
Libau, 174
Lisbon, 65
Madeira, 20
Malta, 35
Melbourne, 215 22 bxs.
Monaster, 25
Montreal 25
New York, 370 25 bgs 30 cks.
Odessa, 400
Oporto, 128
Parnahyba, 30
Paris, 30 brls.
Pasages, 16
Pernambuco, 100
Philadelphia, 248
Quebec, 25 50 pks.
Rangoon, 18
Rio de Janeiro, 20
San Francisco, 50
Savanilla, 20
Seville, 650 60
San Jose de Guatemala, 60
San Sebastian, 31
Stettin, 15
Sydney, 5 bxs.
Toronto, 30
Tripoli, 16
Varna, 50
Venice, 50
Chemicals *(otherwise undescribed)*
Stettin, 2 t. 15 c. £78
Copenhagen, 16 30
Hamburg, 10 14
Piræus, 14 24
Mersyne, 4 7
Naples, 1 35
Naples & Genoa, 4 16 166
Tripoli, 10 17
Beyrout, 1 35
New York, 5 2 168
Syra, 5 cks. 45
Catania, 14 24
Genoa, 10 brls. 44
Philadelphia, 13 9 442
Odessa, 57 11 1 q. 268
China Clay—
Bombay, 395 cks.
Boston, 120
B. Ayres, 80
Montreal, 200 t.
Naples, 5
Opobo, 40
Philadelphia, 200 bgs.
Rio de Janeiro, 70
Rotterdam 100
Citric Acid—
St. Petersburg, 1 t. 5 c. £150
Brisbane, 2 15
Coal Products—
Alizarine Oil
Lisbon, 3 cks.
Aniline Colours
New York, 12 cks 1 bx.
Aniline Oil
Genoa, 2 dms.
Aniline Salt
Boston, 25 cs.
Genoa, 10 cks.
New York, 93
Piræus, 15
Pitch
Bilbao, 40 brls.
Boston, 74 cks.
Callao, 20
Cartagena, N.G., 1
Catania, 25
Galatz, 30
Odessa, 20 t. 12 c.
Tar
Alexandria, 2 brls.
Belize. 30
Cape Town, 25
Galatz, 55
Ibrail, 22
Kingscove, 25
Odessa, 59 t. 12 c.
San Francisco, 100
Smyrna, 21 cks.
Sulina, 16
Sierra Leone, 20
Tar Oil
Copenhagen, 4 dms.
Coal Products *(otherwise undes.)*—
Syra 5 cks.
Cobalt Oxide—
Montreal, 1 q. £8
Copper Sulphate—
Tampico, 5 t. £87
Galatz, 5 c. 5
Ibrail, 5 103
Odessa, 20 2 1 q. 357
San Francisco, 101 9 8
Vera Cruz, 18 1 18
St. John, N B., 5 5
Sydney, 5 6
Algiers, 9 19 1 180
Leghorn, 10 4 3 182
Ghent, 2 12 1 48
Antwerp, 1 1 20
Rouen. 35 4 631
Marseilles, 49 17 3 900
Oporto, 5 1 86
Bordeaux, 414 1 2 7,173
Naples, 15 8 242
Genoa, 223 1 1 3,726
Venice. 85 2 2 1,426
Nantes, 17 7 2 267
Bari, 5 4 3 89
Paris, 69 1 2 1,265
Philadelphia, 6 10 14
Copperas—
San Francisco, 13 t. 7 c. £29
Tripoli, 20 brls. 8
Cream of Tartar—
Montreal, 2 t. 10 c. £150
St. John's, N fld., 1 5
Disinfectants—
Cape Town, 22 kgs. £11
Alexandria, 5 t. 11 c. 2 q. 57
Shanghai, 1 6
Dried Blood—
Gd. Canary, 4 t. £23
Guano—
Mentreal, 67 t. 18 c £450
Gypsum—
Victoria, B.C., 4 t. 18 c. £10
New York, 35 10 114
Indigo Waste—
New York, 5 t. 12 c. 1 q. £131
Insecticide—
Madeira. 2 c £10
Iron Oxide—
Naples. 1 t. 3 c. £7
Philadelphia, 11 19 180
Lime—
Pernambuco, 5 t. £9
Magnesia—
Genoa, 1 q £50
Magnesium Chloride—
Bombay, 12 t. 3 c. £29
Magnesium Sulphate
Alexandria, 150 pks.
Montreal, 90 cks.
Rio de Janeiro, 150 kgs.
Santiago, 33 brls.
Manure—
Madeira, 61 t. £465
Oxalic Acid—
Boston, 6 t. 11 c. £180
Paint—
Alexandria, 50 dms. 2 bxs.
Ambriz, 40 kgs.
Antwerp, 16 brls. 12
Arecibo, 4
Bahia, 1 cs. 12 brls.
Belize, 5 62 cks. 114 40 dms.
Beyrout, 30
Bilbao, 32
Bombay, 478 100 dms.
Bonavista, 2 160
Bordeaux, 12 7
B. Ayres, 29
Calcutta, 50
Callao, 95 120 34 brls.
Cienfuegos, 3
Ferrol, 2
Galata. 100
Gd. Canary, 70
Halifax, 2
Havana, 10
Hong Kong, 60 dms.
Ibrail 5 50
N. Orleans, 40
Perth. 5
Philadelphia, 72
Ponce. 2
Pt. Elizabeth, 6 1 bx.
Rio de Janeiro, 15
St. Domingo, 4
Santiago de Cuba, 8
Sherbrooke, 120
St. Thomas, 3
Sulina, 2
Valparaiso, 12 24 cs.
Vera Cruz, 40 dms.
Vigo, 7
Painters' Colours—
Calcutta, 30 kgs. 8 dms.
Cape Town, 9 cs.
Cartagena, N.G., 1 ck.
Chama, 1 cs.
Copenhagen, 8
Demerara, 5 15
Genoa, 40
Hamburg, 35 bgs.
Lagos,

Lisbon, 2
Malta, 3
Manaos, 2
Mayaques, 1 brl.
Melbourne, 2 cs. 20 19
Montreal, 67 brls. 37 125
N. Orleans, 300 brls.
N. York, 28 pks. 28 208
Ponce, 100
Quebec, 21
Rio de Janeiro, 8 10
Rio del Rey, 10 34
St. Domingo, 5 17 7
St. John's, N B., 2 1 cs.
" N'fld., 16 302 40 brls.
Santos, 40
Seville, 20
Smyrna, 400
Stockholm, 15
St. Nazaire, 4
Sydney, 17 dms 1 cs.
Syra, 4
Teneriffe, 2 cs. 118
Toronto, 2 20 2
Vancouver, 87 cks.
Vera Cruz, 10
Victoria, B.C., 97
Vigo, 8

Paraffin Wax—
Alexandria, 10 cs
Piræus, 6

Phosphorus—
Hiogo, 2 t. 1 q. £325
Hong Kong, 2 c. 2 25
Shanghai, 3 583
Trinidad, 3 20

Picric Acid –
N. Orleans, 18 c. £85

Potash—
New York, 2 t. £80

Potassium Bichromate—
Piræus, 7 t. 7 c. £278
Vera Cruz, 1 2 3 q. 52

Potassium Chlorate—
Funchal, 3 c. £7
Odessa, 2 t. 84
St. Petersburg, 18 10 766
Sydney, 4 166
Catania, 10 19
Naples, 1 5 50
Genoa, 1 40
Hiogo, 34 16 1,480
Hong Kong, 2 77
Havana, 15 30
Philadelphia, 2 10 94
New York, 11 5 428
Boston, 10 382
Gutujewsky, 35 1,367
Lilau, 9 16 393
Antwerp, 10 19

Potassium Prussiate—
Toronto, 3 c. £10

Salt—
Algoa Bay, 9 t.
Axim, 24
Baltimore, 730
Bathurst, 1 c.
Boston, 430
B. Ayres 88
Calcutta, 1,988
Copenhagen, 3 2
Coquimbo, 250
Dunedin, 30
Ghent, 100
Havana, 3 10
Manaos, 7 2
Melbourne, 85
Montreal, 170 16
N. Orleans, 65
Old Calabar, 40
Opobo, 10
Philadelphia, 250
Puget Sound, 468
Rio de Janeiro, 50 cs.
St. John's, N'fd., 10
St. Petersburg, 450
San Francisco, 50
Stockholm, 92
Wellington, 30

Salt Cake—
Liston, 34 t. 16 c. £63
Baltimore, 451 13 393

Saltpetre—
Halifax, 1 t. 6 c. £30
Cartagena, N.G., 1 10 36
Porto Alegre, 6 8
Pernambuco, 2 10 63
Barcelona, 3 15 80

Sheep Dip –
Singapore, 3 t. 3 c. £30
B. Ayres, 8 18 9 q 250
M. Video, 8 181
Cape Town, 40 dms. 18
E. London, 100 80
Belize, 4 11

Soap—
Accra, 50 bxs.
Alexandria, 78 cs.
Algoa Bay, 1,740
Aligator Pond, 50
Amboyna 500
Ambrizette, 200
Anamaboe, 65
Antwerp, 1,800
Baltimore, 20 1
Barbadoes, 1,125
Bathurst, 105
Beira, 52
Belize, 1
Bombay, 750 4
Bonavista, 6
B. Ayres, 1
Cabenda, 100
Calcutta, 250 bdls.
Campana, 20
Canaria, 470
Cape Coast, 2
Cape Lopez 100
Cape Town, 2,095
Coronel, 20
Curacao, 120
Dakar, 25
Delagoa Bay, 50 5
Drewin, 119
E. London, 1,674 52 4
Elmina, 91
Genoa, 25
Grand Popo, 50
Halifax, 200
Havre, 255
Kingston, Jam., 856
Kingscove, 8
Kurrachee, 12
Lagos, 136
Landana, 250
Limon, 1,000
Livingstone, 300
Malta, 5
Manaos. 820
Mauritius, 11
Menada, 1,000
Montreal 7 250 1 ck.
N. Orleans, 100
New York, 800
Opobo, 1,250
Para, 500 50 bdls.
Penang, 20 10
Pt. Elizabeth, 900 20 2
Pt. Natal, 635 50
Poti Novo, 100
Rotterdam, 665
St. John's, N'fd., 133
St. Lucia, 360
St. Thomas, 2,100
Salt Pond, 70
Sinoe, 50
Sydney, 17 tanks
Teneriffe, 353
Valparaiso. 15 4 brls.
Victoria, B. C., 557
Zanzibar, 100 250 bdls.

Soda—
Boston, 10 cks.

Soda Alkali—
Barcelona, 35 brls.
Bilbao, 51
Galatz, 82
Legborn, 35
Monastor, 25
Odessa, 250
Smyrna, 35

Soda Ash—
Antwerp, 200 bgs.
Bahia, 15 cks. 12 kgs.
Baltimore, 1,160 31 127 tcs.
Barcelona, 37
Boston, 1,465 119 73
B. Ayres, 50 550 brls.
Calcutta, 50 100 kgs.
Cartagena, N.G., 50
Catania, 50
Corfu, 20 brls
Hiogo, 100
Havana. 2
Hong Kong, 38
Lisbon, 16
Madeira, 4
Melbourne, 160
M. Video, 100 100
N. Orleans, 33 tcs.
Oporto, 15
Patras, 90
Philadelphia, 1 200 152
Rio de Janeiro, 80 brls.
St. Petersburg, 8
Samarang, 10
San Francisco, 51
Smyrna, 600 100
Syra, 128
Sydney, 128
Varna, 70
Venice, 10
Zante, 124

Soda Crystals—
Cape Town, 12 kgs.
Copenhagen, 50 brls.
Hiogo, 20
Malta, 50 cks. 50
Montreal, 5 cs.
N. Orleans, 140
Philadelphia, 420
Pt. Said, 30
Quebec, 200
St. John, N.B., 10
Toronto, 75

Sodium Bicarbonate—
Adelaide, 140 kgs. 50 bgs.
Aleppo, 12
Alexandria, 50 123 brls.
Algoa Bay, 40
Antwerp, 20
Baltimore, 100 cks.
Bayonne, 18 pks.
Bilbao, 9 70
Bombay, 125
Bourgas, 14
B. Ayres, 65 27 cks.
Calcutta, 100
Cape Town, 55
E. London, 20
Galatz, 49
Hamburg, 60 10
Hong Kong, 30
Lisbon, 110
Melbourne, 140 11
Motril, 290 dms.
Nantes, 34
Naples, 120
Newcastle, 40
New Fairwater, 100
New Orleans, 300
Newport News, 150
Odessa, 50
Palermo, 50
Paris, 115 50
Quebec, 25
Rotterdam, 77
Santander, 90
Seville, 100 20
Smyrna, 60
Valencia, 45 5 50 pks.

Sodium Carbonate—
New York, 168 brls.

Sodium Chlorate—
Boston, 125 kgs.
Lisbon, 1 ck.
New York, 15 dms.

Sodium Hyposulphite—
Melbourne, 36 cks.

Sodium Silicate—
Cartagena, Sp., 4 brls.
Madeira, 6
Malta, 15 cks.
Philadelphia, 11
Vera Cruz, 63

Sodium Sulphate—
Lisbon, 2 t. 4 c. £5
Montreal, 18 cks.

Starch—
Boston, 15 cks.

Sulphur—
Halifax, N.S., 115 t. 1 c. £416
Boston, 1,502 bgs. 733
Halifax, 25 brls. 9
Montreal, 500 274
Pernambuco, 10 c. 5

Superphosphates—
Bilbao, 295 t. 10 c. £575
Teneriffe, 10 20

Varnish—
Barcelona, 1 cs.
Calcutta, 5 pks.
Callao, 14
Ceara, 1
Genoa, 8 cks.
Madras, 8
Melbourne, 4
M. Video, 12
Oporto, 1 brl.

Whiting—
Bonavista, 15 pks.

MANCHESTER.

Week ending June 24th.

Alum—
Hamburg, 25 brls.

Ammonium Carbonate—
Rotterdam, 7 cks.
Antwerp, 10 kgs.
Hamburg, 2

Ammonium Chloride—
Tunis, 6 brls.

Aniline Colours—
St. Petersburg, 10 dms.

Aniline Oil—
Rouen, 5 dms.
Rotterdam, 10

Aniline Salt—
Rotterdam, 2 cks. 10 pns.

Anthracene—
Rotterdam, 15 t.

Benzol—
Rotterdam, 9 dms.

Bleaching Powder—
Rio de Janeiro, 6 cs.

Borax—
Tunis, 2 brls.

Caustic Soda—
Rio de Janeiro, 8 dms.
Tunis, 15

Chemicals *(otherwise undescribed)*
Beyrout, 10 brls.
Cairo, 90 cks.

Cottonseed Oil—
Tunis 30 brls.

Glue—
Antwerp, 10 cks.
Melbourne, 1

Mineral White—
Rio de Janeiro, 10 bgs.

Oxygen –
Treport, 100 tubes

Painters' Colours—
Alexandria, 4 cks.

Paraffin Wax—
Rio de Janeiro, 5 cs.

Soap—
Hamburg, 2 cks.

Soda—
Rio de Janeiro, 2 brls.
Rotterdam, 6 cks.

Sodium Bicarbonate
Alexandria, 10 kgs.
Tunis, 55

Sulphuric Acid—
Rio de Janeiro, 28 cs.

Tar Oil—
Rotterdam, 25 cks. 1 dm.

Tar Salts—
S. Petersburg, 51 bgs.
Antwerp, 32 cks.

Toluol—
Rotterdam, 95 brls. 30 dms.

HULL.

Week ending June 20th.

Ammonium Sulphate –
Ghent, 84 bgs.

Barytes—
Stettin, 100 t.

Benzol—
Amsterdam, 46 cks.

Bleaching Powder—
Danzig, 155 cks.
Stettin, 20

Caustic Soda –
Abo, 2 cks. 50 dms.
Danzig, 70
Riga, 224
Wyburg, 13

Chemicals *(otherwise undescribed)*
Amsterdam, 5 cks.
Bergen, 2 cs.
Christiania, 4
Copenhagen, 4
Drontheim, 10 pks.
Danzig, 4
Gothenburg, 32
Hamburg, 16 300
Konigsberg, 1
Liban, 33
New York, 9
Riga, 2 100
Rotterdam, 95 62
Stettin, 5 3 22
St Petersburg, 1
Trieste, 18
Uleaborg, 11
Venice, 20 9

Cottonseed Oil—
Antwerp, 613 c.
Amsterdam 1,382
Bremen, 304
Copenhagen, 199
Danzig, 49

Gothenburg, 100
Hamburg, 1,676
Harlingen, 99
Rotterdam, 1,352
Stettin, 13

Creosote—
Stettin, 6 brls.

Dyestuffs (*otherwise undescribed*)
Antwerp, 51 cks.
Christiania, 1
Rouen, 10
Rotterdam, 5 cs.
Stettin, 2

Glue—
Ghent, 20 bgs.
Rotterdam, 1 cs.

Linseed Oil—
Antwerp, 107 c.
Amsterdam, 40
Christiansund, 77
Christiansand, 35
Christiania, 536
Drontheim, 17
Hamburg, 247
Helsingfors, 10
Rotterdam, 105
Trieste, 35

Manure—
Dunkirk, 1,846 bgs.
Jersey, 5 t.
Stettin, 2,862 bgs.
St. Petersburg, 9
Libau, 1,494

Naphtha—
Ghent, 14 dms.

Ochre—
Hamburg, 5 cks.

Painters' Colours—
Antwerp, 17 cks. 8 dms. 3 pks.
Amsterdam, 13 3
Bordeaux, 18
Christiania, 1 cs. 60
Copenhagen, 16 1 2
Dunkirk, 2
Drontheim, 3
Danzig, 12
Gothenburg, 5 1 1 dm.
Ghent, 30 1
Hamburg, 13 60 pks.
Helsingfors, 103
Jersey, 2
New York, 91
Rouen, 20 1
Rotterdam, 12 1
Stettin, 35 20 dms.
St. Petersburg, 76 3 cs.
Stockholm, 6
Trieste, 4
Uleaborg, 10
Venice, 3
Wyburg, 100

Pitch—
Antwerp, 166 t.

Rosin—
Stavanger, 12 cks.

Soap—
Bergen, 22 cs.
Copenhagen, 2

Tallow—
Antwerp, 70 cks.
Amsterdam, 15
Stockholm, 22

Tar—
Amsterdam, 16 cks.
Abo, 10
Christiania, 4
Dunkirk, 15
Hamburg, 5
Helsingfors, 195
Rotterdam, 12

Treacle—
Abo, 5 cks.

Turpentine—
Helsingfors, 10 cks.

Varnish—
Antwerp, 5 cks. 1 cs.
Christiania, 1
Danzig, 3
Ghent, 2
Hamburg, 1
Rotterdam, 5
Stettin, 10 1
Venice, 1

GLASGOW.

Week ending June 25th.

Acetic Acid—
Rio de Janeiro, £24

Albumen—
Rio de Janeiro, £57

Ammonium Sulphate—
Antwerp, 101 t.
Hamburg, 75 19 c.
Barbadoes, 101 11¾
Demerara, 227 10½
New York, 24 17¾
Trinidad, 56 19½

Barytes—
Karachi, 10 t.

Bleaching Powder—
Calcutta, 35 t. 1¾ c.

Boracic Acid—
Yokohama, £78

Borax—
Yokohama, £64
Melbourne, 26

Carbolic Acid—
Richmond, Va., £42

Chemicals (*otherwise undescribed*)
Melbourne, £34
Trinidad, 3 t. 1½ c.

Coal Products—
Creosote Oil
Christiania, qty.
Hamburg, 5 t. 8 c.
Pitch
Genoa, 562 t. 13 c.
Gothenburg, £180
Leghorn, 199 6
New York, 135
Antwerp, 408
Canada, 247
U.S A., 292
Tar
Christiania, 70 brls.
Calcutta, £204
Canada, 55

Coal Products (*otherwise undes.*)—
Rotterdam, 39 t.
Warsaw, 380

Cod Oil—
Bergen, £85

Dyestuffs (*otherwise undes.*)—
Melbourne, £100
Montreal, 31

Extracts—
Melbourne, £53
Bergen, 6 c.
Christiania, 8 t. 12
Canada, £65
Toronto, 56

Farina—
Rio de Janeiro, £22

Gelatine—
U.S.A., £261

Iodine—
Rotterdam, £235

Lead Acetate—
Bombay, 2 t. 18½ c.

Lead Nitrate—
Genoa, 2 t. 13¾ c.

Linseed Oil—
Adelaide, £47
Christiania, 2 t. 8 c.
Hong Kong, 5 ½
Demerara, 3 15½
Trinidad, 2 10¼

Magnesium Sulphate—
Rio de Janeiro, £24
Canada, 5 t. ¾ c.

Manganese—
Rotterdam, 1 t. 12 c.

Manganese Oxide—
U.S.A., £115

Manure—
Demerara, 38 t.
Trinidad, 80 19¾ c.

Paint—
U.S A., £49
Adelaide, 65

Painters' Colours—
Bangkok, £140
Bombay, 115
Hiogo, 77
Hong Kong, 104
Rotterdam, 1 t. 14 c.
Colombo, 67
Hiogo, 38
Montreal, 84
Sydney, 86
Tientsin, 74

Paraffin Wax—
Bordeaux, £30
Genoa, 23 t. ¾ c.
Christiania, 60
Hong Kong, 50

Potassium Bichromate—
Genoa, 20 t. 16¾ c.
Leghorn, 2 1¾
Melbourne, 1 1¾
Rotterdam, £328
Antwerp, 64
Bombay, 3 9½
U.S.A., 10 6¼

Sheep Dip—
Sydney, £348

Soap—
E. London, 8 t. 18 c.
Bombay, £27. 11s.
Hong Kong, 2 8½
E. London, £39
Trinidad, 19 1¾

Sodium Bichromate—
Genoa, 27 t. 12½ c.
Leghorn, 3 16½
Bombay, 2 ½
U.S.A., 3 4¾

Starch—
Rio de Janeiro, £160

Sulphuric Acid—
Rangoon, £340
Demerara, 68

Superphosphates—
Trinidad, 52 t. 4 c.

Tallow—
Rangoon, 4 t. 11½ c.
Antwerp, 54 7

Treacle—
Christiania, 7 t. 4½ c.
Drontheim, 6 13
Cape Town, 1 12
Amsterdam, 2 11
Bergen, 14 15

White Lead—
Adelaide, £40
Calcutta, 1 t. 7 c.
Melbourne, 40

TYNE.

Week ending June 20th.

Alkali—
Antwerp, 5 t. 1 c.
Hamburg, 5 14
Christiania, 9 19
Rotterdam, 5 17
Libau, 20 1
Amsterdam, 32 1

Alumina Sulphate—
Antwerp, 2 t. 1 c.

Ammonium Carbonate—
Barcelona, 2 t.

Ammonium Chloride—
Barcelona, 2 t.
St. Petersburg, 11

Antimony—
Antwerp, 1 t.
New York, 45
Hamburg, 6

Arsenic—
Barcelona, 2 t. 17 c.
Gothenburg, 18

Barium—
Hamburg, 1 t. 13 c.

Barytes—
Hamburg, 100 t.
New York, 86 11 c.

Bleaching Powder—
Antwerp, 43 t. 2 c.
Hamburg, 15 15
Venice, 25 cks.
Konigsberg, 11 t. 3
Rotterdam, 7
Trondhjeim, 10
Copenhagen, 6 14
Amsterdam, 14 19
St. Petersburg, 20 2

Caustic Soda—
Genoa, 4 t. 1 c.
Antwerp, 6 3
Hamburg, 2 2
New York, 69 3
Christiania, 2 18
Venice, 6 6
Barcelona, 30 7
Rotterdam, 10 10
Gothenburg, 20
Aalborg, 1 9
Pernau, J.A., 28 2
Copenhagen, 5 16
Amsterdam, 1 17
St. Petersburg, 50 4
Abo, 31 11

Linseed Oil—
Ergasteria, 10 c.

Litharge—
Christiania, 2 t. 16 c.
Rotterdam, 5
Copenhagen, 1 2
Abo, 1 7

Magnesia—
Hamburg, 1 t. 2 c.
Barcelona, 10
Genoa, 1 4
St. Petersburg, 2 7

Manure—
Valencia, 256 t. 19 c.

Ochre—
Christiania, 2 t. 3 c.

Paint—
Genoa, 1 t. 9 c.
Hamburg, 1 10
Vadso, 4
Ergasteria, 10
Sebastopol, 1
Constantinople, 15
Abo, 14

Potash—
Ergasteria, 11 c.

Soap—
Stavanger, 1 c.

Soda—
Stavanger, 4 t. 19 c.
Rotterdam, 30
Drontheim, 40 2
Antwerp, 9 17
Constantinople, 16 5
Amsterdam, 10 4
Abo, 26 16

Soda Ash—
Antwerp, 10 t. 10 c.
Hamburg, 2 2
Konigsberg, 134 18
Gothenburg, 49 19

Sodium Bicarbonate—
Abo, 1 t.

Sodium Hyposulphite—
Hamburg, 30 t.
New York, 10
Odessa, 1
Abo, 7 c.

Sodium Silicate—
Valencia, 5 t. 5 c.
Venice, 7 6

Sodium Sulphate—
Drontheim, 828 t.
St. Petersburg, 10 1 c.

Sulphur—
Antwerp, 11 t. 1 c.
Christiania, 60
Gothenburg, 20
Abo, 1 1

Tar—
Vadso, 1 t. 5 c.
Drontheim, 5

Varnish—
Bergen, 3 c.

White Lead—
Copenhagen, 4 t. 13 c.

GOOLE.

Week ending June 24th.

Benzol—
Boulogne, 25 cks.
Rotterdam, 71 12 dms.

Caoutchouc—
Boulogne, 2 cks.

Chemicals (*otherwise unscribed*)
Ghent, 5 cks.
Harlingen, 1

Coal Products (*otherwise undes.*)—
Boulogne, 73 cks.
Ghent, 3
Rotterdam, 210

Dyestuffs (*otherwise undescribed*)
Dunkirk, 1 ck. 4 cs.
Ghent, 17 bgs.
Hamburg, 40 141

Pitch—
Antwerp, 50 t.

GRIMSBY.

Week ending June 27th.

Chemicals (*otherwise undescribed*)
Hamburg, 36 dms.

Coal Products (*otherwise undes.*)—
Dieppe, 104 cks.
Hamburg, 4 tons.
Rotterdam, 1

PRICES CURRENT.

WEDNESDAY, July 1st, 1896.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids :—			
Acetic, 25 % and 40 % .. ..per cwt.	6/	&	9/-
,, Glacial .. .. ,,		40/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅜
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	3
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/-	&	35/-
,, Nitrate .. .. per ton	37	10	0
,, Phosphate .. .. per lb.	0	0	6¾
,, Sulphate (grey) London .. .. .. per ton	8	2	6
,, ,, (grey) Hull .. .. ,,	8	0	0
Aniline Oil (pure) .. .. per lb.	0	0	8¼
Aniline Salt ,, ... ,,	0	0	8
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	12	0	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	30/-
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	2	9
,, 50/90 ,, ... ,,	0	2	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	2	3
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	10
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. : per gallon	0	1	4
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	49	3	9
,, Sulphate .. .. ,,	17	0	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	7	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	3	9
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	10	0
,, ,, brown ,,) .. .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	19	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	2	6
,, ,, (grey) (ex ship .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	15	0
,, Ore, 70 % .. .. per ton	3	15	0
Methylated Spirit, 61° O.P. .. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	1¾
Oils :—			
Cotton-seed .. .. per ton	17	0	0
Linseed .. .. ,,	19	10	0
Petroleum, American .. .. per gallon	0	0	6½
Stearine .. .. per ton	21	15	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. ..nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	10	0
,, Chlorate .. .. per lb.	0	0	4½
,, Cyanide, 98% .. .. ,,	0	1	1½
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	10	0
,, Prussiate Yellow .. .. per lb.	0	0	7
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	7½
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	15	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	15	0	0
,, Chlorate .. .. per lb.	0	0	5½
,, Borate (Borax) .. .. net, per ton	20	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	7	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	10	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	10½
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	15	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	2	6
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6¾
,, Barium, 95 % .. .. ,,	0	0	4¾
,, Potassium .. .. ,,	0	0	7
Sulphur (Flowers) .. .. per ton.	6	5	0
,, (Roll Brimstone) .. .. ,,	5	10	0
,, Brimstone : Best Quality .. .. .. ,,	3	17	6
Superphosphate of Lime (26% .. .. ,,	2	17	6
Tallow .. .. ,,	19	10	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	64	10	0
Zinc (Spelter) .. .. ,,	18	2	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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AND

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HOW ARE THE MIGHTY FALLEN.

A CHANGE not altogether unlooked for has recently taken place in the nature of the evidence which has been given before the Parliamentary Committee inquiring into the petroleum laws. It is not the nature of the evidence we are surprised at, but the witnesses. The evidence itself, however, will afford ample indication of the how and forwhy.

Professor Dewar was unfortunate in having to give his evidence so soon after Sir H. Roscoe, as the contrast was all the stronger. There are only three points in his evidence, however, that call for special remark; the rest was too old and exploded to need refuting. He makes a great feature of the small number of accidents compared with the number of lamps used. We do not quite see that it proves much about the safety or otherwise of 73° oil. We know this, however—twenty-five years ago gas was not used as extensively as now, and oil was not the light of the poor man only. Were there less lamps used then than now? There were certainly fewer accidents; they were almost unknown. Yet since oil flashing at 73° has been introduced they have increased up to hundreds a year. Railway fatalities are few compared with the millions travelling daily, but are the precautions for safety relaxed in consequence, or Board of Trade inquiries no longer made because the proportion of accidents is so infinitesimal? Why should we therefore conclude that there is no need for the general use of a safer oil because of Professor Dewar's figures? He also speaks of experiments which show that there is little, if any, difference in safety between 73° and 100° oil. We need ample assurance, however, that his experiments which give such irrational and inconsistent results tally with the customary conditions of daily use, and that his oils were not like those used by Messrs. Abel and Redwood some years ago—prepared, instead of being trade products. Lastly, his own evidence condemns the present standard of 73° as fallacious. He says,

"If Parliament undertook legislation that would convey to the public that oil could be used safely in the present lamps, they would have to fix the flash-point at 212°F."

Yet they are daily conveying this identical impression with a standard of 73°F. No man of unbiassed thought can deny that raising the flash-point to 100°F. would be a decided step towards safety, since that temperature is seldom attained when burning oil in lamps *in this country*. Professor Dewar missed an excellent opportunity of shining as a humorist when propounding his idealistic temperature of 212°F., he should have pushed his argument further until he had reached its inevitable ultimate *reductio ad absurdum*. We are seeking comparative, not absolute safety. In attaining *safety* 212° F. would only impose a burden on the trade without achieving the object. We know quite well, and so must he, that to get a *safe* oil you must raise the flash-point until it will not burn at all. He has

not refuted the statement that a standard of 100° or 105° F. would practically secure the cessation of our daily immolations.

Professor Abel reiterated his opinion arrived at many years ago, but he does not say whether he has sought to confirm or modify his opinion by the further researches and experience of latter years. He endeavoured to explain the War Office anomaly of one standard, for the Government and another for the people, but he was not very successful, for his explanation is self-condemnatory. He said,

"The War Office on his advice used petroleum of much higher flash-point than the legal *minimum*,"

Which in common or garden language is the *standard of safety* for the people.

"But that was because in dealing with an inflammable liquid like petroleum in barracks . . . exceptional precautions were desirable. He did not think, however, any necessity had been shown for the extension by legislation of like precautions in other directions."

So after mature consideration a gentleman of such parts, is honestly convinced that for the oil burned in the comparatively few lamps used in barracks (which are practically isolated buildings) among men whose doings are regulated with clock-like punctuality, and who are compelled to be sober and orderly by a rigorous discipline, under which the careless use of an oil lamp would incur punishment—under such conditions as these, be it noted, "a much higher flash-point" is necessary for safety than for the oil burned in the 10,000,000 lamps said to be in use every night all over the country in crowded and over-heated rooms, by absolutely irresponsible people who in the excessive exuberance of alcoholic hilarity, or the callous indolence bred of poverty, perpetrate fatalities nightly under the fatuous belief that they buy and use *safe oil*—as which it is sold by nine out of ten retailers. 'Tis strange reasoning. Dr. Lunge made a point of the fact that he appeared at the request of the Hamburg Oil Co., but that he had no interest in that company, and gave his evidence independently. We should like to know more about the Hamburg Oil Co. As far as we can make out, it seems to be one of the many pseudonyms for the ever-grasping S.O. Dr. Lunge's evidence was interesting, but little else, as it throws no light on the main point – the suitability of our present petroleum laws. It is interesting to know what is being done in Switzerland; still we are not considering the laws of that country, but deaths at home—in London and elsewhere—under conditions similar to those attending the recent fatalities at one of the shops of Messrs. Davies and Evans, concerning which the Chief Officer of the London County Council made such striking statements. Dr. Lunge thinks that the German flash-point is quite safe, though a little lower than ours is at present. So it may be - in Germany. Keep it there. Why don't they adopt it in Switzerland? It will be a bad day for England when it gets as tight in the clutches of the S.O. as Germany is. Yet such is their avowed aim. There is one other point which is important. Prof. Dewar boldly asserts that 212°F. must be fixed on to convey a correct impression to the public in the matter of safety, but Dr. Lunge is content with saying that it would only be necessary to go above 120°F. to ensure *absolute safety*. We have expressed our opinion regarding absolute safety, but one of these two gentlemen (who so evidently look through the same glasses over this flash-point question) must be altogether out of it. Dr. Lunge's statement certainly indicates a better knowledge about petroleum, saving the word absolute.

So much for what has been. Now for a word on what is to be. It is well known that the sitting of the Committee is to be prolonged, so that some American witnesses may be called. Quite right too. It is, however, likewise quite right that the Committee should acquaint themselves with the nature of the witnesses who are to appear, and the precautions that must be taken to ensure their evidence being reliable. It is this point we wish to deal with.

This inquiry is not a law case in which "experts" can be paid to take one side, and only look one way. The witnesses must give their evidence spontaneously, as the result of their own honest investigations and convictions; and almost without exception we know this to have been the case up to now, no matter what were the views held.

Now, in any case the Committee were well acquainted with the theory that the whole affair was nothing but a protectionist move on the part of the Scotch trade, and they, therefore, had their faces set against the Committee being used for this purpose. Yet an American oil paper that never fails to assert its claims to the *rôle* of an "authority" on oil matters, sullies its much vaunted reputation with the following tissues of errors:—

With a view to giving Scotch petroleum protection against American oils, a committee of the House of Commons is inquiring into "the conveyance and storage of petroleum." English experts examined by the committee, notably Prof. Boverton Redwood, assert that the flash-point of petroleum ought to be 100 to 120 degrees. The flash-point of Scotch (shale) is 100 degrees; in the case of American oils it would be necessary to eliminate 30% of its constituents to bring it up to 100 degrees. If the standard flash-point be raised, the Scotch oil refiners will sell their produce at a higher figure. That is what the committee is for.

The Committee will doubtless be incensed to think that they could be suspected of such corruption, but it should prove useful to them in showing what gross and wanton misstatements American oil "authorities" can be guilty of, and how serious is the danger of their obtaining and giving unscrupulous evidence. Possibly they may find a salve for their wounded feelings in the fact that Mr. Redwood, who is the right hand man of the American low-flash party, is ruthlessly saddled with supporting their opponents. That he should be made to hold the opinion he is accredited with in the paragraph we quote, only shows that the author of it cannot read or comprehend plain English.

We think, however, this justifies our statement that the future witnesses will want cautious handling. The Committee ought to take such steps as will save them being made the unwitting tools of the S.O. Co., in the same way as that relentless corporation credits them, through their organ, with fostering the interests of the Scotch trade only. If the Committee can be beguiled into reporting in favour of leaving the standard at 73° F., there will be some "bonuses" to be distributed, and the Committee should learn something o the channels they are likely to fall into. The Americans know to their own cost that when one hand alone can absolutely control a sum like 150,000,000 dollars a year, the controller in some subtle and discreet way can endow even Justice herself with Röntgen-lit eyes, so that she can see clearly through her bandage to deftly adjust her scales notwithstanding that at the same time she manifestly appears blindfold to the unsuspecting. The same hand is not idle now, though it does its work insidiously and tortuously. We can recite a tale worth telling, should it be necessary, about the way some of the low flash evidence is got. We think we have said enough, however, for the Committee and the present. Still we cannot but feel that if the true history and aims of the powers that are now fighting for the low standard were known to the Committee, they would report in favour of raising the standard, if only to rob chicanery and the other "c" of its victory.

When one of the witnesses trotted out his iron reservoir fad in the face of all the lamp makers' direct evidence, the Chairman was gracious enough to say that the suggestion should find a place on the minutes. May the above sentence be afforded the same in the minds of the Committee—such is our humble memorial.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Liquid Soap. J. Mendess. 13,726. June 22.
Extracting Vegetable Fibres. W. Warburton. 13,815. June 23.
Recovering Sulphur from Hydrogen Sulphide. J. Brock and F. Hurter. 13,844. June 23.
Manufacture of Calcium Carbide. W. R. King and F. Wyatt. 13,881. June 23.
Manufacture of White Lead. W. P. Tatham and W. Tatham. 13,886. June 23.
Manufacture of Explosives. G. Beneké. 13,922. June 24.
Manufacture of Cyanate Salts. O. Imray. 14,002. June 24.
Metallic Alloys. C. Parnacott. 14,006. June 24.
Sewage Precipitants. A. Angell and F. Candy. 14,124. June 25.
Improved Sewage Filter Packing. A. Angell and F. Candy. 14,125. June 25.
Dry Soap. J. Lightfoot. 14,198. June 26.
Ferro-sodium Fluxes. A. E. Tucker and T. V. Hughes. 14,222. June 26.
Paints and Varnishes. D. Marcus. 14,267. June 26.
Mill for Grinding Chemicals, etc. W. O. Cofield. 14,271 June 26.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

A Process for the Manufacture of Cyanides. J. Pfleger, Kaiserslautern, Germany. Eng. Pat. 15,116. August 10, 1895.

Stress is laid on some of the drawbacks attending the use of the Siepermann and Beilby processes, and the inventor claims to prevent the preliminary formation of cyanate, forming marketable cyanide direct by the treatment of a mixture of potassium carbonate, and charcoal, with ammonia or nitrogen gas The procedure in outline consists in mixing the potash and charcoal in the proportion of 5 to 1 in a crucible fitted with a gas-tight cap and delivery and escape tubes. When the contents of the crucible have been heated to 900°C., ammonia is forced through at a pressure of 5 lb. above the atmosphere, charcoal being gradually added at the same time This treatment is continued for about two hours, or until the resulting evolution of carbonic oxide and hydrogen ceases. Pure cyanide is said to result, free from any bye-products, save possibly a slight excess of charcoal, which can easily be removed. When air is used, the temperature necessary for the reaction is higher, but this is in a measure compensated by the fact that the charcoal can be mixed at once with the potash in the crucible, and by its combustion with the oxygen in the air assists in attaining the higher temperature.

Manufacture or Production of Granulated Aluminium and Magnesium. W. L. Wise, 46, Lincoln's Inn Fields, London, E.C. (Communicated by the Aluminium-Industrie-Actien-Gesellschaft, Neuhasen, Switzerland.) Eng. Pat. 15,959. August 24, 1895.

The customary method of granulation is inapplicable owing to the particles of metal enclosing water, and thus forming explosions when used for alloying Another difficulty is that the globules are frequently hollow, and so can only with difficulty be incorporated with molten metals of higher specific gravity.

This invention takes advantage of the peculiar property which aluminium or magnesium possess of losing all cohesion when heated to near their melting point. By heating in a furnace to about 100° C. below the melting point, and then subjecting to a stamping or grinding action, either of the metals can be reduced to small grains of any desired size, which are solid and present a comparatively large surface.

Manufacture of Hydrocyanic Acid. A. K. Huntington, King's College Strand, London, W.C. Eng. Pat. 14,855. August 6, 1895.

About equal volumes of acetylene and nitric oxide are drawn into a cylinder with a piston, like a gas engine, and fired by an electric spark. The products of combustion, which consist mainly of carbonic oxide, hydrogen, and hydrocyanic acid, are expelled by the instroke of the piston and passed through a solution of potash or soda to absorb the HCN. The carbonic oxide and hydrogen which pass on can be used for combustion purposes.

An Improved Electrolysing Apparatus. J. Kolb, Director of La Société des Manufactures des Produits Chimiques du Nord, Lille, and A. D. A. Lambert, 10, Rue des Cannoniers, Lille. Eng. Pat. 14,342. July 27, 1895.

The characteristic feature is the special arrangement of the electrodes, the two faces of which are of opposite polarity, so that all connections may be dispensed with. The current sent into the apparatus passes through these electrodes at right angles to their surface. The resistance is very slight, the electrodes being very thin ($\frac{1}{10}$ millimetre), so that it practically only amounts to that offered by the electrolyte itself. The general arrangement will best be understood by consulting the four drawings which accompany the specification. Briefly stated, however, the electrolyser consists of two series of ebonite plates, one with conducting blades or extensions, each face of which constitutes an electrode. The intermediate plates have porous extensions, thus forming a series of compartments in which the electrolyte circulates. The electrodes being operative on both sides, there is no need of any additional connections. If a plate breaks it can be removed at once without interrupting the action of the electrolyser.

Improvements in Machinery or Apparatus for Washing Wool or other Fibres. J. C. Walker (trading as J. Perry), Shipley Fields Mill, Shipley, Yorkshire. Eng. Pat. 12,904. July 4, 1895.

This patent describes certain improvements in a wool washing apparatus, which has already been detailed in patents 20 916/93 and 17,543/94. There are seven figures showing different views of the improvements. The general arrangement may be described as an adjustable rocking washer-bowl, which is also fitted with a mechanical contrivance for alternately raising and immersing the washer-bowl.

THE MINERAL OIL INQUIRY.

FURTHER evidence has been taken before the Committee conducting this inquiry. Sir F. Abel gave it as his opinion, as the result of many years' study and experiments by himself and other scientific chemists, that the present legal flash-point of 73 deg. Fahrenheit close test was sufficient and safe; and he substantially agreed with Professor Dewar's evidence. It was true that the War Office, on his advice, used petroleum of much higher flash-point than the legal *minimum*, but that was because in dealing with an inflammable liquid like petroleum in barracks among large bodies of soldiers exceptional precautions were desirable. He did not think, however, any neccessity had been shown for the extension by legislation of like precautions in other directions. With regard to the testing apparatus associated with his name, it was not a monopoly. It was manufactured by the trade generally, and the only restriction placed upon its free use was that an apparatus sold by a manufacturer must be submitted to the Board of Trade for inspection. The Chairman: Then this was an invention which you gave to the public, and you derive no advantage from it whatever?—Undoubtedly; I was a Government servant.

Dr. George Lunge, of the Polytechnicum, Zurich, said, he appeared before the Committee at the request of the Hamburg Oil Company, but he presented his evidence independently, having no connection with that company. He had paid attention to the flashing point of petroleum, and had made investigations as to the use of petroleum in Switzerland with that object in view. He had sent a circular to each of the 19 State analysts of the cantons of Switzerland, and he had received replies from all Some of them were of a meagre character, but the State chemists of all the chief cantons stated that the Abel test was everywhere applied, although they had independent power to use their own. Some of them nearer to Germany used the German test, because the petroleum they used passed through Germany. Each canton legislated separately on these matters. To make oil absolutely safe it would be necessary to go to above 120 degs. Fahr., but naturally that would lead to an increase of price, which would be a matter of serious consideration to the poorer classes. The German flash-point he regarded as quite safe. It was 69·8° F., but he would not be a party to the alteration of the English flash-point, although the flash-point of Germany was lower.

Professor Karl Engler, President of the Department of Chemistry of the German Government, gave it as his opinion that to raise the flash point in Germany from 70 deg. to 100 deg. or 104 deg. Fahr. would add 20 per cent. to the price of oil to the consumer. The committee adjourned.

MERSEY AND IRWELL JOINT COMMITTEE.

THE monthly meeting of this Committee was held at the offices, Mosley-street, Manchester, on Monday, Sir J. T. Hibbert being in the chair. The chief business of the meeting was the consideration of the position of the Manchester Corporation and the progress of their sewage scheme. Mr. T. W. Killick, in presenting and moving the report of the Consulting Sub-committee, said the Committee reported at a meeting of the Joint Committee on the 5th of May that the consideration of the position of the Corporation of Manchester was adjourned for two months, to enable them to determine whether or not they would carry out the scheme for the filtration of the sewage which had been laid before the Committee, or what further measures would be adopted by them, and the clerk wrote requesting them to report to the Joint Committee at the earliest date as to the steps they were prepared to take in the matter. On the 30th June a letter was received from the Town Clerk, stating that on the 7th May the special sub-committee of the Corporation passed a resolution instructing the City Surveyor to prepare plans and estimates for filtration works as indicated in the report of Sir H. E. Roscoe, and to submit the same as early as possible. The City Surveyor was under the necessity of making numerous trial holes on the proposed site of the artificial filter beds indicated in Sir H. Roscoe's report, as a preliminary to the preparation of the plans and estimates. "The result of the trial holes," the letter proceeded, "has unfortunately proved very unsatisfactory, and unexpected difficulty and expense would arise in the construction of the artificial filters, requiring most careful consideration Upon the City Surveyor reporting this to the sub-committee, he received further instructions on the 23rd inst. to report generally upon the whole matter. The sub-committee feel that a question of this magnitude cannot be dealt with in a hurried manner, and under these circumstances respectfully request that a further period be allowed for the preparation and consideration of the City Surveyor's plans, estimates, and report." The Chief Inspector reported that ten million gallons of sewage were poured into the river untreated. After carefully considering the whole question, the Consulting Sub-committee recommended that

PROCEEDINGS AGAINST MANCHESTER

Corporation be taken for offences against the Mersey and Irwell Joint Committee Act, 1892. Mr. Killick said the effect of figures which had been prepared seemed to be that Manchester was effectually treating one-sixth of her sewage. He dared say the cost of the extra acres of land required for filtration purposes might be a matter worthy the consideration of the Manchester Corporation, and that they wished to find some cheaper method of solving the difficulty; but however much the Committee might sympathise with Manchester, he did not think it justified them, as a Committee, in giving her any more time in order that she might save expense. They had no right to give any more time than was proved to be absolutely necessary. The Committee had been in existence for five years, and he thought the time had come, if it had not long since passed, when every authority should be efficiently treating its sewage, or, at least, have fully matured plans adopted and works for the carrying out of those plans in course of construction. The matter was undoubtedly urgent, and he would ask the Committee to refer to letters which had been received from the Ship Canal Company, who seriously complained of the condition of the water of the canal, and from the Corporation of Eccles. The Chief Inspector and he (Mr. Killick) could fully endorse the complaints made as to the stench, and also as to the amount of solid matter brought by the rivers into the docks. Taking all things into consideration, the sub-committee felt that they would not be doing their duty if they did not recommend that the Committee should take the necessary proceedings against the Corporation, and he therefore moved that such proceedings be taken.

Mr. V. K. Armitage seconded the motion. He said he did so for the reason that, although he had a very considerable amount of sympathy with the Corporation of Manchester, and recognised the great difficulty they had to contend against, he thought the time had come when it was the bounden duty of the Committee to bring some additional pressure to bear upon them. The Corporation were not proceeding as fast as they ought and might proceed, and he felt this difficulty, that if they did not deal with the Manchester Corporation and insist to the utmost of their power in getting the work hurried on, they were not justified in bringing proceedings against smaller authorities all over the watershed and against individual polluters. He knew it was said up and down the watershed that the only reason why they did not proceed against the Corporation of Manchester, as they had proceeded against smaller Corporations, was that Manchester was so large and so powerful, and had so large a representation upon the Committee that practically they dare not do it. All who sat at that Committee knew that was not the fact. If Manchester had a good case the time had come when the responsibility for further delay should be taken from the shoulders of that Committee.

Mr. Alderman Hopkinson said that up to the present moment Manchester had, since the time that it began, done all that it was possible to do. Sir H. Roscoe's report was dated June 30th, only five days since. On that report they had now to proceed; but what could they have done in five days? He thought the report of the sub-committee showed a certain amount of animus.

Mr. Armitage said ten million gallons a day were turned untreated into the rivers.

Mr. Alderman Thompson: Not at all.

Mr. Alderman Hopkinson said the only portion that passed untreated into the rivers and so into the docks was from those sewers which were not coupled up. No sane man would say that they could have done the work more quickly than they had done it. They could not estimate the time, when an amount of three-quarters of a million of money was being spent on sewage works. It appeared from the report that all this untreated matter passed into the docks, but that was not so, because the outfall was below the Manchester docks.

Mr. Alderman Thompson said the impression left on his mind was that there was the reverse of a friendly feeling shown by the Consulting Sub-committee towards the Manchester Corporation.—(Oh.) He need not go beyond those walls, and that afternoon, to prove it. The remarks which Mr Armitage had made proved it. Manchester was a *bête noir* to that Committee. People who were sinners higher up the river tried to get rid of their own responsibility by saying that the Committee let Manchester off. He was surprised that his friend, Mr. Armitage, the son of one who so long and so ably filled the position of alderman and afterwards Mayor of Manchester, should have so poor an idea of the work of the Manchester Corporation. He hoped and believed that the men who were in the Corporation to-day were just as sincere and just as anxious to do their duty as were the men of 1848. He (Mr. Alderman Thompson) would say very little upon the subject as it had to come before another tribunal, but he reminded the Committee that up to the 31st March of this year the Corporation had already spent £609,000. in structural works, and if they proceeded as they intended they would have paid another £118,000. by the 31st March next. The Corporation had not spent that money intending to throw it into the sea. They intended to carry the work out perfectly, but time must be given. The Corporation were trying to do their duty, and would not be able to proceed faster even if proceedings were taken against them.

Dr. Scowcroft suggested that the chairman of the sub-committee should accept a friendly amendment that a little longer time should be allowed to Manchester.

Mr. Killick said the sub-committee would accept no amendment.

Dr. Scowcroft moved as an amendment that an extension of time be given to the Manchester Corporation of three months.

Mr. Alderman Jenkins seconded the amendment. He said he knew Manchester was doing, he would not say its utmost, but all that it reasonably could do, and he knew from experience that a matter of that kind could not be pushed without harm being done.

Mr Alderman Cheetham supported the amendment.

Dr. Sidebotham assured the representatives of Manchester that there was no animus on the part of the sub-committee in this matter. It was frequently said that they dare not proceed against Manchester. The sub-committee felt that the time had come when Manchester should have a chance, before a court of law, of proving that she was doing all she could in this matter.

Mr. V. K. Armitage disclaimed any feeling of animosity towards Manchester.

In the course of further discussion, Mr. Alderman Thompson said the reason why the whole of the sewage of Manchester was not precipitated was because some of the contractors had not done their work within the specified time, inasmuch as there were quicksands and other difficulties to be dealt with.

Mr. Killick replied, and said that the sub-committee had no hostile feeling towards Manchester. He regretted that Mr. Armitage should have been singled out for attack by Mr. Alderman Thompson.

The Chairman said they must all admit that Manchester had shown *bona fides* in the matter, but in view of all the facts he felt that the sub-committee were justified in using pressure towards the Corporation.

Upon a division, the amendment was defeated by nine votes to three, and the original resolution was then put and carried.

Mr. Alderman Hopkinson asked the chairman to kindly note that none of the Manchester representatives had voted.

The Chairman said it was not for the Committee to notice it. It would be unusual.

A letter addressed to the Chairman of the Committee was read from Mr. J. K. Bythell, chairman of the Ship Canal Company, complaining of the continued serious pollution of the water in the canal and the docks by Manchester, Salford, and other authorities. A letter from the Town Clerk of Eccles, written under the instructions of the Sanitary Committee of the Eccles Town Council, was also received, complaining of nuisance caused by the smell from the water in the canal. The letters urged that steps should be taken to mitigate these nuisances.

letters were referred to the chief inspector, with instructions to it the next meeting.
Committee soon afterwards adjourned.

XPORTS OF PETROLEUM FROM U.S.A.

Chief of the Bureau of Statistics, Washington, gives the llowing returns of the exports of petroleum and petroleum s for May, 1896. The total shipments were 84,562,853 compared with 58,609,126 gallons in May, 1895. The total for en months ending May 30th, 1896, was 801,237,166 gallons, 806,783,987 gallons during the same period in 1895. The of the shipments are as follow:—

			CRUDE PETROLEUM.	Gallons.
Total,	May,	1896	.....	12,556,982
,,	,,	1895	.....	6,330,474
			NAPHTHAS.	
Total,	May,	1896	.....	615,6 6
,,	,,	1895	.....	298,694
			ILLUMINATING.	
Total,	May,	1896	.....	67,407,713
,,	,,	1895	.....	44,854,523
			LUBRICATING AND PARAFFIN.	
Total,	May,	1896	.....	3,982,252
,,	,,	1895	.....	4,124,175
			RESIDUUM.	
Total,	May,	1896	.....	252
,,	,,	1895	.....	1,260

ILLEGAL TRADE COMMISSIONS.

S is a question to which reference has often been made in these olumns being of special interest to the trade. A legal expression ion, and that a forcible one, has been expressed this week, and, the case is altogether out of our sphere, his Lordship's n is relevant. The case, which was heard on Monday in the s Bench Division, was one in which the plaintiffs, Messrs. nn and Co., house furnishers, of Hampstead-road, London, Messrs. H. F. Long and Co, table-knife manufacturers and ealers, of Hallamshire Works, Sheffield, to recover £135, as had and received by the defendants to the use of the plaintiffs on ts relating to ivory cutlery, and also damages for the defendants as was asserted, corruptly procured contracts from one of the ffs' buyers at prices in excess of those current in the market. fendants denied all the plaintiffs' allegations, and had brought a ction to recover £119., for goods sold and delivered, which had onsolidated with the first-named action, and was tried at the me.

Lord Chief Justice, in summing up, said the course which had aken by the learned counsel in the case had very much ied the matter. It was agreed that the jury need not be d with finding any question of fact as to pecuniary loss, but that should find that a corrupt bargain had in fact been made between endants' firm on the one hand and the plaintiffs' late servant yer Wood) on the other hand, then the parties would agree that tribunal should inquire into the extent, if any, of the loss, ary or otherwise, which plaintiffs' firm had suffered. Therefore, mple question which he should ask the jury was, "Did the ants' firm, by Mr. Alexander Biggin, one of the partners, make upt bargain with the plaintiffs' buyer to the prejudice of the ffs?" The question was one of very great moment to the ants, for two reasons—first, because the credit and veracity of their firm was in question; and, second, because if the jury answer the question which he had put to them affirmatively, it ted their firm of a very corrupt and dishonest system of trading. importance did not end there. He did not stop to speak of its ance to plaintiffs, but he could not forbear speaking of its ance in the interests of honest trading. Having reviewed at ength the facts of the case, he said he thought the plaintiffs were d in resorting to the device they did to ascertain the facts, and Stone's account was correct it established an admission by Mr. nder Biggin that he had with Wood a corrupt bargain. In con-, the learned Judge said this business of corrupt bargains was a iant canker, it was affecting honesty in all, or many at least, of ations of life, and was not confined to commercial relations. It shonest to fair trade; it was dishonest to the fair employer; it down that principle of morality which ought to be observed all men who desired to cultivate and deserve honesty. The Legislature had made it a crime to make corrupt bargains with persons holding public positions; and if the evil which constantly cropped up in courts of justice continued to exist, as it had in past times existed, the Legislature must set themselves to cut out this canker, and juries also must not flinch from their duties.

The jury said they were of opinion that undoubtedly there had been a corrupt bargain.

Judgment was not entered, but the case stood over with a view to the parties arriving at a settlement as to the figures, in order to obviate an inquiry.

MANGANESE IN SPAIN.

IN an article on "Manganese and manganiferous ore" in Spain, by Mr. R. W. Barrington, appearing in the "American Manufacturer," it is stated that it is most difficult to furnish precise and accurate statistics of the production and exports of these minerals from Spain owing to the fact that the mines producing ore of the above description are nearly always registered indiscriminately under the multifarious heading of "Iron Ore Mines," and no official record is kept distinguishing between the "manganese ore," "manganiferous iron ore," and "iron ore proper."

As a proof of the absolute uncertainty of the official statistics, I may mention that while in 1892 the production of manganese was certified as being 16,910,000 kilos, in 1893 it was given from the same source, viz., the Comision Ejecutiva de Estadistica minera as only being 1,460,000 kilos. A large portion of the manganese ore exported was no doubt simply reported and declared by shippers as "Iron Ore."

The districts in Spain producing the largest quantities of manganese during 1895 were Huelva, Oviedo, Covadonga in the Pyrenees; Cuidad Real and Cape de Gate in the province of Almeria. Most of these deposits produced an oxide of manganese running from 30 to 60 per cent. of metallic manganese, the silica in same varying from 8 to 25 per cent.

Since 1870 the production of manganese ore in the Peninsula has steadily been decreasing, owing no doubt to the better facility for obtaining richer mineral from other districts, chiefly the Caucasus, Chili, Cuba, &c.

Manganiferous ore exists in enormous quantities in the Sierras in the south of Spain, and the export of this class of ore, ranging from 4 to 22 per cent. of metallic manganese, during 1895 may be roughly estimated at about 400,000 tons. Very much the largest portion of the so-called iron ore produced in the south of Spain is manganese bearing ore of the above description. The district of Cartagena, in the province of Murcia, produces large quantities of ore, which are sold on the following basis:—

Manganese. Per cent.	Iron. Per cent.	Silica. Per cent.
20	20	11
17	25	11
15	30	11
12	35	11
6	44	8
3	47	8

This ore is chiefly exported to the United States, England, and Germany.

A large portion of the iron ore in the province of Almeria is found associated with from 2 per cent. to 6 per cent. of manganese; the mineral shipped from the districts of Aguilas and Parazuelos also contains about three per cent. of manganese.

While much of the manganese ore in Spain often contains an excessive quantity of phosphorus, the manganiferous iron ore is particularly free from this objectionable matter, and seldom, if ever, runs over 0·02 per cent. when found in connection with iron ore.

The following analysis may be taken as representing the character of the manganiferous ore in the south of Spain:—

	Cartagena Manganiferous. Per cent.	Aguilas Ore. Per cent.
Carbonic acid, combined water, etc.	16·33	12·90
Lime	—	1·45
Silica	5·14	8·00
Ferric oxide	35·84	69·02
Manganese oxide	30·89	7·57
Alumina	·31	·61
Phosphoric acid (P_2O_5)	·04	·02
Sulphuric acid (SO_3)	·31	·14
Zinc oxide	·84	—
Magnesia	·45	·23
Metallic iron	25·09	48·67
Metallic Manganese	22·26	5·74

Reports of Companies.

LAUTARO NITRATE CO., LTD.

ADDRESSING the shareholders on the occasion of the recent eighth annual meeting of this company, the chairman (Mr. Rau), after dealing with the general financial position of the company, said:—We propose to put to depreciation account £6,476. I do not think I need give you many explanations of the reasons why we propose this, because it has been our constant practice to write off a part of the value of the grounds. I think this is absolutely necessary in every nitrate business, because, as you are aware, the caliche does not grow when it has been taken out of the ground. When all the caliche has been taken out of the ground of any nitrate company nothing remains but the bricks and machinery, which are worth anything they will fetch in the desert; therefore, it is only prudent to write off part of what you have taken out, or an equivalent in value of what you think you ought to write off the value of the grounds, so as to have the balance of the ground always well represented by the figure in your books. (Applause.) The next item which we have to take off the balance of the profit and loss account is the sinking fund for the redemption of the debentures, to which I have already referred. This, of course, is in compliance with the trust deed. We wish to comply with it as fully as possible, so that our debentures should always be perfectly represented by the money that we set aside. I think it is a good principle, because it will give our debentures and the financial position of the company greater strength. The balance then remaining is £52,278. This balance, added to the one carried forward from last year, gives a total in the balance-sheet of £58,541. We have already paid an *interim* dividend of 5%, free of income-tax, on account of 1895. We now propose to pay a final dividend of 5%, which, if you accept the accounts and agree to our proposals, will be paid immediately. This will absorb another £27,500., making £55,000. in all, and allow us to carry forward to the year 1896, £3,554. I do not think I have anything else to say, excepting a few words with regard to the Combination. I said a great deal on this subject last year; so that you know very well what the opinion of your board is on the matter. I am rather sorry to say that we have been good prophets, because the prices this year, after the Combination, of which so much was expected, are rather below than above the prices of last year when there was no Combination. We have told you in our report that we attribute this situation chiefly to the enormous shipments during the first months of this year. We ought, perhaps, to have said that we principally attribute it to that, and we think that is the chief cause. There may be another, namely, the fall in the price of sulphate of ammonia, the production of which in the United Kingdom has considerably increased of late. We hope, however, that the Combination may do us good, and certainly I do not think it will do us any great harm.

UTILIZING MINERAL PHOSPHATES.

IN his report to the Canadian Agricultural Department, Mr. F. T. Shutt, F.I.C., makes an interesting contribution to this subject. He points out that the finely-ground mineral phosphate (apatite), according to experiments made in his laboratory at Ottawa, is but very slightly soluble in 1 per cent. citric acid solution. "Thus, my results, obtained when using such a solvent in the proportion of one part of phosphate to 100 of the solution, showed that when treating a finely-ground phosphate containing approximately 25 per cent. of carbonate of lime, only 6·2 per cent. of the total phosphoric acid was rendered soluble. In other words, 1·5 per cent., approximately, of phosphoric acid had passed into solution by this treatment. Science has, therefore, corroborated practice, in showing that the ground mineral phosphate cannot be regarded as an economical source of *available* phosphoric acid, though undoubtedly the fineness and specific hardness of the material largely determines its exact value in this respect.

"From these results it became apparent that a previous treatment of the mineral phosphate was desirable and, indeed, necessary, if it was to be applied with a view to immediate returns.

"To this end various experiments have been made in the laboratory of the Central Farm since 1893 towards a means of cheaply and effectively converting the phosphoric acid of ground phosphate into soluble and available forms, by means of the sulphates and bisulphate, and carbonates of the alkali metals. The first report on these experiments is contained in the report of the Minister of Agriculture for 1893. It is there shown that the fusion of one part of finely ground phosphate with the bisulphate of soda renders soluble a large proportion of phosphoric acid. Thus, in one instance, phosphoric acid equivalent to 38·49 per cent. of apatite had been so converted. I may be allowed to quote from that report my conclusions as to the solubility of the phosphoric acid after ignition with the sulphates and bisulphates of soda and potash:—'I infer from these results (1) that any soluble phosphoric acid that may be formed during the ignition of the mine phosphates with the sulphate of soda and potash immediately combines in the presence of water to form tricalcic phosphate, (2) that the ignition of the mineral phosphates with the bisulphates soda and potash produces, according to circumstances, more or soluble phosphoric acid.

"'This latter conclusion is a very important one, since it is poss that by using the bye-product, sodium bisulphate, an economical met for the treatment of mineral phosphates may be devised. It is scar necessary to add that such a process would prove of great value Canada and Canadian agriculturists. Before an affirmative statem can be made regarding the commercial success of such a method converting and utilising our phosphate, the cost of the raw mater and of the treatment, as well as the price obtainable for the ma factured article must be taken into careful consideration.'

"Since 1893, further work had been done, the details of which h not yet been published. These latter experiments comprise the foll ing:—(*a*) Heating together finely-ground phosphate and sulphate soda, and treating the residue with 2 per cent. of citric acid solut The results showed that phosphoric acid equivalent to 35 per cent 37 per cent. of the phosphate had been dissolved.

"(*b*) Ignition of the finely-ground phosphate with sodium bisulp and treatment of the mass with 2 per cent. citric acid solution. this case 50 per cent of the apatite was found to have been rend soluble in the acid solution.

"The by-product that was used in these experiments contained a small proportion of bisulphate, the larger part being sulphate of s It did not yield, therefore, as large an amount of soluble phosph acid as when pure bisulphate was used.

"These experiments, the results of which I have condensed, were m before the appearance of Dr. Dyer's most important paper. C sequently, I was not then aware that 1 per cent. citric acid represe the acidity in root sap. My solvent was undoubtedly too stron give results which would allow us to say that the percentage phosphate above stated are such as are rendered immediately avail for plant use. Nevertheless, we may safely draw the conclusion ignition of the finely-ground phosphate with sulphate of soda, as we the bye-product, bisulphate of soda, does convert a considerable am of phosphate into a form much more readily available than phosphoric acid in the untreated material.

"I intend to repeat these experiments, using 1 per cent. citric solution for the treatment of the ignited mass.

"(*c*) The third series of experiments in this investigation conduct us affords data regarding the effect of igniting finely-ground phos with (1) wood ashes and (2) carbonate of potash. A mixture of ashes and finely-ground phosphate was heated together, and the subsequently treated with water. In the aqueous extract, phosp acid equivalent to 1·25 per cent. of the phosphate was found. residue, after treatment with water, was left over night in a 1 per solution of citric acid; this brought into solution phosphoric equivalent to 3 per cent. of the phosphate. As the duplicate e ment in this trial closely agreed, we must infer that simple heating wood ashes does not appreciably improve the solubility o phosphoric acid in the mineral phosphate.

"In the next experiment sand was added to the wood ashes and g phosphate before ignition. This method was not found to increas percentage of available phosphoric acid over that found in the prec experiment.

"Trials were then made by fusing together carbonate of potash finely ground phosphate. Treatment of the mass with water diss phosphoric acid equivalent to 6·5% of the phosphate, and the s tion of the residue to the action in the cold of 1% citric acid f dissolved phosphoric acid corresponding to 43·00% of the phospha

"From these experiments, I conclude that ignition with wood does not materially increase the availability of the phosphoric ac apatite, but that ignition with carbonate of potash does so materially. If commercially any of the processes that comprise h ground phosphate with the sulphates and bisulphates or carbonat soda or potash are practicable, undoubtedly we have a means of r rendering more or less immediately available much phosphoric now locked up and well-nigh useless to agriculture.

"I may point out that if the potash salt were used in the fusion resulting fertiliser would contain, in addition to the available phoric acid, another element of almost equal importance to farm c viz., potash."

RHEA FIBRE COMPANY.—A company for the treatment and mar ture of rhea fibre by the Gomess process has been registered unde name of the Rochdale Rhea Fibre Spinning Company, Ltd., and it tended to begin business in the first instance at the Castleton Mills, Rochdale. Arrangements have been made for the private subscri of the necessary capital. Further particulars are to be found und heading of "New Companies," elsewhere in this issue.

SEPARATION OF GOLD AND SILVER BY VOLATILISATION.

By Dr. J. W. Richards.

In making the quantitative blowpipe assay for gold and silver, it is usual to treat 100 milligrams of ore at a single fusion, yielding buttons which are too small to be weighed accurately, but whose weight must be found by measuring carefully their horizontal diameters.

As determined by Plattner (and often verified in the writer's experience), silver buttons weigh 0·6346 of the weight of spheres of silver of the same diameter as measured, and gold buttons 0·7506 of the weight of gold spheres. The buttons obtained usually weigh 0·5 to 1 5 milligrams, and the separation of the silver from the gold in buttons so small is a matter of considerable difficulty. Plattner remarks that no satisfactory method of separation in the dry way is known, and recommends the parting by nitric acid. Working, however, with buttons smaller than pin-heads, it is extremely difficult to boil two or three times with nitric acid, to wash until the silver salt is all removed, and then to gather and melt down the gold, without losing a considerable proportion of the gold in three or four directions.

Knowing that, on long heating, silver gives a coating of oxide on charcoal, and that gold does not, I made experiments to determine whether silver could be thus separated from gold, and have found the method practicable. On heating to a bright-yellow heat (not to whiteness) upon charcoal an alloy of gold and silver, before a sharp-pointed oxidising flame, the silver volatilises easily and steadily until there is less than 5% of silver remaining in the gold. I estimate this volatilisation to take place a little above the melting point of copper, say at 1,100–1,200°C. To remove the remainder of the silver, the heat is raised nearly to whiteness, or to about the melting point of steel (1,500° C). When the silver is entirely eliminated, the gold, at this temperature, begins to volatilise also; in fact, a trace of gold will be carried off with the last of the silver, and if the ash of the charcoal be white it will show a faint crimson coating close to the assay. When this coating is heavy enough to be seen without the use of a lens, the silver has been completely volatilised and the remaining button is pure gold. The amount of gold necessary to give this coating is too small to be determined by weighing or measuring.

Having explained the principle made use of, I will give the further details of conducting the operation. The charcoal should be dense, so as not to burn away too quickly. Too light a charcoal will not stand the five or ten minutes' application of the oxidising flame without burning through the piece. It should also leave a white ash under the oxidising flame, so as to furnish a background on which to see the crimson gold coating which determines the end of the operation. I have found the dense, hard charcoal made by Johnson and Co, of New York, to answer these requirements admirably. It is well, also, to work with a porcelain saucer, or large sheet of clean paper, under the flame to catch the button in case it should be blown from the charcoal.

In order to perform this separation without excessive exertion, I would recommend that a gas flame not over 2 centimeters high be used, that the tip of the blowpipe be advanced at least halfway through the flame, and inclined somewhat sharply downwards, at an angle of about 45°. By observing these simple directions, a very sharp-pointed, needle-like oxidising flame will be produced, about 1 centimeter in length to the blue tip, which I have found the best for the purpose in view. To produce this the blowing need not be strong, but it should be kept up steadily. The button, in a shallow cavity near the end of the stick of charcoal, is now brought directly in front of the point of the flame, at about 1 to 2 millimeters from the visible blue tip. Its position, of course, is regulated by the temperature observed. The button ton should not, at this stage, be heated to whiteness, else the silver will boil and cause a loss of sputtering. The charcoal is held inclined towards the flame at an angle of about 30°, so that the flame descends almost vertically upon the button, and thus decreases the liability of its displacement by the force of the blast.

It will be found practicable to continue a blowing for about three minutes without discomfort, at the end of which time the operator may stop to observe the colour of the button. Supposing the alloy, on starting, to have been white, it will usually become pale yellow in from three to six minutes. When the alloy exhibits a brass-yellow colour, the heat should be raised, and the next blowing continued for not over two minutes. At the end of this time the alloy will usually exhibit nearly the pure gold colour, but no gold coating, or, at most, only a trace of it will be seen on the charcoal. After this, the heat should be raised to nearly whiteness, and then continued for not over one minute at a time. If a faint gold coating appears, further heating for one minute will usually develop a distinct crimson coating, visible without the lens, and the alloy will show the pure gold colour. It is then taken out, cupelled and measured.

If the amount of gold present be very small, it is difficult to continue volatilising silver after the button gets smaller than ¼ millimeter in diameter. The difficulty is caused by the ash of the charcoal, which, fusing to a slag, envelopes the button To continue the removal of the silver, should the button arrive at this size without showing the gold colour, the operator cupels and measures a pure gold button of about the same size, and adds it to the button being treated. The enlarged button is now worked down to pure gold, as before, removed, cupelled, and measured. The weight of gold obtained is diminished by the amount added, the difference giving that in the ore.

If the heating to incipient whiteness be continued two or three minutes after the visible gold coating is obtained, a very pretty gold coating of bright, peach-blossom colour is obtained, and a sensible amount of gold is lost by volatilisation. A pure gold button, 1 millimeter in diameter, weighing 7 58 milligrams, lost 0 03 milligrams (0 4 per cent.) each minute that it was heated to whiteness, and in five minutes gave a beautiful crimson coating A silver button of similar size lost 18 per cent of its weight, each minute, at only a bright yellow heat. I estimate the point at which gold begins to volatilise as about the melting-point of soft steel (1,500° C). It is certainly considerably below the melting-point of platinum (1,775° C.)

In conclusion, I wish to say that I have tested this method of separation in many different ways, with large and small buttons, and upon alloys rich and poor in gold, and have found the separation to be absolute when the conditions above described are properly observed. I have repeatedly alloyed a gold button with different amounts of silver, and then driven off the silver, the button, after two or three of such separations, remaining of exactly the same size and weight as at the start. In proposing this method of separation, I do not wish to disguise the fact that, to ensure success, it demands a steady hand and an experienced operator, and some practice; but I believe that any one who has mastered the art of blowpiping sufficiently to make gold and silver assays, can, in a short time, master this method of separating the gold and silver.

[In the discussion of the above paper, it was suggested that the method might be practicable in the ordinary assay of gold and silver, as, at assay offices, if an electrically heated furnace could be devised, in which the buttons could be placed on suitable supports, and kept at the proper temperature to volatilise silver, with a current of air passing over them. The movement to the hottest part of the furnace would suffice to remove the last traces of silver, just as the last traces of lead are removed in cupellation in an ordinary muffle. The process of removing the silver would then resemble cupellation in its general outlines, except that the temperature would be about 300° to 500° higher.]

DESTRUCTION OF AN OIL WORKS.

Between Friday night and Saturday morning, 4th inst., the extensive works of Messrs. Le Brocquy and Co., known as the Dublin Oil and Grease Works, were totally destroyed by fire. So fierce and rapid was the fire that in a short space of time there was not a square inch of the whole area over which the works extend that was not in possession of the flames, while the roof had completely disappeared. The office inside the main entrance from the road was totally destroyed, but the books of the business, being in a fireproof safe, escaped uninjured. The safe, uninjured save for the twisting of a few plates, and with the contents intact, was rescued, after having fallen through a floor, by two of the firm's men. Hundreds of barrels of oil which were lying in the field were rolled away and secured from the fire, but beyond this the destruction of everything within and in close proximity to the oil works was complete in a few minutes. There were no explosions, although it is not an uncommon thing to have such when grease and oil stored in casks and boxes take fire. The water supply, which the Pembroke Brigade kept pouring on to the flames, was not particularly good, but no amount of water would have had the least effect. The damage amounts to several thousands of pounds, which is not entirely covered by insurance. Messrs Le Brocquy and Co. are extensive contractors, and supply grease to several railway companies for their locomotive departments.

We learn from Messrs. Le Brocquy and Co. that they are making such arrangements as will enable them within the next ten days or so to resume their usual business, and to accordingly execute orders

International Water and Sewage Purification Co., Ltd. —The directors have declared an interim dividend on the preference shares of the company at the rate of 7 per cent. per annum.

Bryan Corcoran Ltd —As briefly stated last week this business has been turned into a limited liability company. It is desirable, however, to further add that this has been done for family reasons, believing the alteration will also tend to facilitate business to their mutual advantage, and for the present no shares are offered to the public. As managing director Mr. Corcoran will still devote himself to the business as before, and hopes that by giving an opportunity to others to share in the profits, it will be considerably extended.

THE SALFORD TAR CONTRACTS.

At the meeting of the Salford Council last week, Mr. Holland proposed the adoption of a report prepared by a special sub-committee, recommending the introduction of a new method of disposing of the tar manufactured at the several gasworks of the Corporation. Mr. Holland explained that hitherto it had been the custom of the committee to advertise in the usual way for contracts for the purchase of the tar, with the very unsatisfactory result that only three or four tenders had been received on each occasion. Moreover, it was a matter of some significance that one particular firm invariably secured the contract. He made no charge against any man in any sense or form. He simply suggested that the Council would very likely see the value of substituting some other system, and that was what the Gas Committee were now proposing. The proposal in effect was that in future a contract should be arranged without resorting to competition, and that the price should be regulated each month by current rates in the open market. In 1893 10s per ton was the highest offer the committee had for the tar; in 1894 it was 15s, and last year, with a new man in competition, the price jumped up to 21s. 9d., so that by the introduction of a little fresh blood the ratepayers were made richer to the extent of £2,000. over previous years. Since the new system began to be considered the committee had actually had an offer of 26s. per ton. That was in May. A month later the same firm made a further offer, £600. or £700. in advance of the first one. This was an enormous jump—more than 250 per cent. above the offer made by the same firm in 1893. It seemed to him to have been made with the object of winning the Council away from the proposal now submitted by the committee, and he hoped it would not have that effect. All that the committee desired was to have the proper market price for the tar. Under the suggested arrangement that end would be secured.

Mr. Phillips seconded the resolution, and said that in the last seven years the Corporation would have had from £10,000. to £20,000. more for its gas tar had it been in the same position, with regard to the sale of the product, as corporations like Nottingham, Leicester, Bolton, Oldham, Sheffield, and Liverpool.

Mr. Alderman Mandley opposed the proposal on the ground that it involved a departure from a very salutary standing order, namely, that all contracts should be advertised and offered to public competition. Was it not a fact, he asked, that Messrs. Hardman and Holden had offered to contract for the tar for a year at the rate of 30s. a ton?

Mr. Hamblett said the Council ought to be in possession of the terms of the report on which the committee had acted.

The Town Clerk read the report, which gave in greater detail the particulars already submitted by Mr. Holland.

The resolution was then adopted unanimously.

NIKOLA TESLA AND HIS LIGHT.

It is announced that Nikola Tesla has solved the problem which he set before himself many years ago, and which may revolutionise the system of electric lighting. It is, electrical experts say, the nearest perfect adaptation of the great force of nature to the use of man.

In Mr. Tesla's laboratory, in Houston-street, is a bulb not more than three inches in length, which, when the current is turned into it, becomes a bulb of light. The mat is almost imperceptible. With it a very large room is so lighted that it is possible to read in any corner. Yet this is done without the attachments necessary in existing lights.

The rays are so strong that the sharpest photographs may be taken by them. No new dynamo is required to produce the current. There is no danger of harmful shock in its use.

Stories have come from time to time from Mr. Tesla's laboratory that he was experimenting on a light of this sort. Rumours of success and failure have followed each other, and Mr. Tesla's friends were inclined to doubt that he would succeed. A half-dozen times the discovery was at his finger tips, only to elude him. But now he has told his friends of his success.

Mr. Tesla has been working for many years on his theory of the necessity and practicability of the conversion of electricity. The present incandescent light gives only 3 per cent. of illuminating power; the other 97 per cent. is wasted in heat.

In accordance with his theories, which have been already applied successfully to the economical transmission of the electric fluid, he applied himself to saving some of this wasted energy in electric light.

The bulb which he has perfected gives 10 per cent. of light and loses 90 per cent. of energy. Mr Tesla declares that he will, with the aid of a few more experiments, be able to produce 40 per cent. of light, so that the waste will be reduced to only 60 per cent., or 37 per cent. less than at present.

The principle of the light is vibration. The illumination is secured by means of what Mr. Tesla terms a vibrator within a bulb, which holds the vibrating needle within a vacuum. The needle vibrates so rapidly that the figures per second sound imaginary, but it is this intensity of energy which gives the light its brilliancy and apparent steadiness. The lights do not have to be renewed.

Trade Notes.

Colonel North's Will.—The late Colonel J. T. North's will has now been proved. The exact net value of his personal estate has been sworn at £263,866. 1s. 11d. the gross value being £575,535 10s. 11d. His widow, Mrs. Jane North, his son, Mr. Harry North, Mr. Lockett, and Mr. Worford Budd are the executors.

Personal.—The Salford Council have approved the appointment by the Technical Instruction Committee of *Dr. Bertram Prentice*, Ph. D., B. Sc, of Edinburgh, as chief lecturer in chemistry at the Technical School, at a salary of £200. per annum, and of *Mr. Ernest Bentz*, Manchester, as chief lecturer in dyeing, bleaching, and printing, at a salary of £150.

Illicit Trade Commissions.—The repeated attacks of the Lord Chief Justice both when at the bar and in his higher capacity, upon the too prevalent practice of "tipping" in commercial dealings is bearing fruit in one much corrupted industry. The Lancashire Calico Printers' Association and other employers' associations in the cotton trade, have issued circulars to the firms trading with them dealing with the question of corrupt commissions, and requesting them to sign an agreement that in future nothing in the shape of a bribe, commission, or present, shall be offered by either party to the other's servant. The agreement is being extensively adopted.

The Badische Aniline and Soda Fabrik.—This company has an extensive exhibit at the Nuremberg Exhibition. It not only includes raw materials, finished products, and dyed fabrics and articles, but also models, plans, and drawings of the whole settlement, the works, workmen's houses, hospital, &c., &c. The area controlled by the company is 960,000 square yards, of which 295,200 are covered by factory buildings, about 600 by workmen's dwellings, and more than 90 by the officials' residences; here, 30 engineers, 100 scientifically trained chemists, 230 clerks, and about 4,800 workmen and others, find employment. 19,000 tons of coal are consumed yearly. There are 14,500 square yards of boiler-heating surface, and steam engine power amounting to 6,500 horse power. There are private gasworks, waterworks, electrical installations, and railways and workshops, the latter covering 13,200 square yards. This is another example of what can be done by attention to efficient, systematic, thorough technological and technical training.

Milk and Margarine.—The Select Committee on Food Products Adulteration dealt recently with that part of their report which relates to the adulteration of milk and butter. Mr. Kearley wished the committee to recommend a distinct standard for milk, but Mr. T. W. Russell (the chairman) opposed this on the ground that such a recommendation would be inconsistent with a previous decision that all questions of the kind ought to be left to the proposed Board of Reference. After some discussion, Mr. Kearley's suggestion was negatived by 12 votes to 3. When the committee reassemble they will be confronted with the margarine problem. The chairman's draft report recommends that there shall be no prohibition of the colouring of margarine in imitation of butter, provided that the colouring material employed is inoccuous. The agricultural members, however, are in favour of absolute prohibition, and, as they are supported by the Nationalists, they will probably carry their point. Another amendment which stands a good chance of being carried is to the effect that the mixing of margarine with butter should be prohibited, the chairman's alternative proposal being that any such mixture should be plainly labelled.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are very firm, and such an erratic advance is reported that 90's cannot be quoted nearer than 2s. 10d. to 3s., and 50/90's 2s. 5½d. Forward quotations are proportionately firm. With regard to other products there is practically no change in position, while there is no quotable alteration in prices. Carbolic acids are steady. Solvent naphtha and crude figure at 1s. 4d. and 10d. to 10½d. respectively. Pitch is neglected at 32s. 6d., f.o.b. East Coast.

Sulphate of ammonia is easier in the northern and eastern markets. At the other ports, however, prices are well maintained. There is no quotation for Beckton. London outside makes figure at £8. 2s. 6d., Liverpool £8. 2s. 6d., Hull £8., and Leith £7. 17s 6d. to £7. 18. 9d., all prompt.

REPORT ON MANURE MATERIAL.

The market remains without animation, but there is rather more inquiry for nitrogenous material. Mineral phosphates are difficult to sell in the United Kingdom, though there is business doing for the Continent in the higher grades. The quotation for 75/80% Florida

rock for United Kingdom is 6d. per unit, and 6¼d. for the Baltic. South Carolina river rock is offering at 5d. per unit, and Algerian (58/63%) at 5¼d., without attracting buyers. Belgian (40/45%) offers at 5¼d. to 5½d. per unit, according to port, c f. & i. River Plate bones, summer shipment, offer at £3. 15s. to direct port, but this price is above buyers' ideas. Bombay bone meal, arrived, may be had at £3 15s. per ton, ex quay, but £3. 17s. 6d. to £4 required for autumn shipment. Crushed Kurrachee bones offer at £4. per ton for autumn shipment, without finding buyers. Nitrate of soda is firmer: On spot 7s. 10½d. is required for fine quality, and 8s. 1½d. for refined. Due cargoes are now worth fully 7s. 10½d. per cwt.

MISCELLANEOUS CHEMICAL MARKET.

Business, generally, in the alkali trade is rather more brisk, though there is no material change in price of any of the sale products. Caustic soda continues at the same level of price as for some time past, viz.: F.o.b., Liverpool, 77%, £9. 7s. 6d; 74%, £8. 7s. 6d.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. net, 10 ton lots and upwards. Ammonia alkali unchanged at £3. 7s. 6d., bags, makers' works, prompt and forward delivery. Soda crystals, 35s. per ton, bags, f.o.r. Leblanc soda ash quiet, and nominally 1d. to 1 1/16d., in casks, f o.b. In bleaching powder there is more business doing, and larger inquiry for forward delivery, current quotations being £6. 15s. f.o.r., and £6 10s. to £7. f o.b. for export. Chlorate of soda remains at 5¼d., and potash 4⅜d. to 4½d. Sulphur firm at £3. 17s. 6d., f o.r., and with higher tendency. White powdered arsenic very scarce and firm for spot and forward delivery at £22. 10s., f.o.r. Garston, etc. Acetates of lime, brown and grey, remain in a quiet position, and without alteration in value. Other acetates unchanged. Permanganate of potash scarce and dearer. Cyanide, 1s. 2d. Prussiate of potash, 7d., but some re-sales still possible between 6¾d. and 7d. per lb. Sulphocyanides are moving steadily, and without alteration in price. Sulphate of copper firm at £16. 15s. f.o.r. Tartaric and citric acids steady. For chemicals, generally, trade is reported quiet in various centres.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron, steady: Scotch warrants closed at 46s. 4d.; Middlesbrough, 37s. 1½d. cash, and hematite, 48s. 10½d. Copper, quiet: Chili bars, G.O.B.'s and G.M.B's., closed at £49. 8s 9d. to £49. 13s. 9d. cash, and £49. 12s. 6d. to £49. 17s. 6d. three months. Tin, quiet: Straits closed at £61. 7s. 6d. to £61. 17s. 6d. cash, and £61. 17s. 6d. to £62. 7s. 6d. three months; Australian, £62. 10s. English ingots, £65. Lead: Spanish, £11. English, £11. 2s. 6d.; Silesian spelter, ordinary, £18. 2s. 6d. Nickel, 1s. 2½d. Antimony, £30. Quicksilver: First hands, £6. 10s; second hands, £6. 9s. *Copper shares*, steady: Cape, 2⅝ to 2¾; Copiapo, 2⅝ to 2¾; Libiola, 2⅞ to 3⅛; Mason and Barry, 3⅛ to 3⅜; Rio Tinto, 24 to 24⅛; Tharsis, 5¾ to 6.

GLASGOW, WEDNESDAY.—Market easier, with fair business. Scotch done at 46s. 5½d. and 46s. 4½d. cash, also at 46s. 6½d. and 46s. 6d. one month; closing with buyers at 46s 4d. cash, sellers ask 46s. 4½d. Cleveland done at 37s. 3½d. one month; closing with buyers at 37s. 1½d. cash; sellers ask 37s. 2d. Cumberland hematite done at 47s. 2d. one month; closing with buyers at 46s. 10½d. cash, sellers ask 46s. 11d. Middlesbrough hematite closes with buyers at 44s. 5½d. cash, sellers ask 44s. 6½d.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical trade is very quiet, with only a moderate demand, and with the exception of sulphur, prices are without alteration. The latter article is firmer, and is now quoted at £4. 2s. 6d to £4. 5s. per ton. Soda crystals, £2. 2s. 6d. per ton, gross weight locally. Caustic, 76/77%, £9. 5s. to £9 10s. per ton.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s., per ton, nett; recovered sulphur, 2 cwt. bags, £4. 5s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2 15s. per ton, nett; white alkali, 48%, £4. 10s. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90 95%, crude calcined, £6. per ton, nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30 per ton, nett.

SALT.—South Durham salt is steady at 9s. per ton, f.o.b., Tees.

COALS.—The coal trade is fairly steady and steam coal collieries are well employed Coke is firm, and continues in excellent demand, especially for local consumption. Prices to-day are as under:—Best Northumbrian steam, 8s. 3d. to 8s. 6d. per ton; second qualities, steam, 7s 3d. to 7s 6d. per ton; small steam, 3s. 6d. to 3s. 9d. per ton; bunker coals, 6s 3d. to 6s. 6d.; household coals, dull, 9s. 6d. to 10s. 6d.; coke, steady, 15s. 6d. to 16s.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

After the despatch of last week's report sulphate of ammonia began to lose the little it had been gaining, and before the week was out the low figure of £7. 17s. 6d. had once more been taken by one or two holders. There is nothing spoken of for forward. In mineral oils and paraffins the market stands nominally unchanged in values, as upheld by the associated producers, but there is only a minimum of business passing. The last section for show of movement is that of lubricating oils, the higher grades of which are in demand. Lighter gravities are less in request, but even these retain the values ruling for some time past. Sulphate of copper is again cheaper. The market for general chemicals is quiet, and prices tend downwards. Bleaching powder and saltcake are both easier.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. 15s. nett, Tyne; white alkali, 48/52°, £4. 10s. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 10s., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 8s. 1½d.; sulphate of ammonia, £7. 17s. 6d. to £8 prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £17. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2 1/16d. to 2¼d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were nil.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Business is very quiet, and in face of present disturbances which may culminate in another struggle in the coal trade, much improvement cannot be anticipated. The present imports up to date include the following as against the same time a year ago: Linseed, 375,986 quarters against 291,503 quarters; Rapeseed, 58,146 quarters against 79,286 quarters; Cottonseed, 97,113 tons against 98,997 tons; Olive oil, 12,206 casks against 6,742 casks; Rape oil, 2,196 casks against 5,023 casks; oilcakes, 8,484 tons against 8,450 tons; Tallow, 33,184 cwts. against 7,846 cwts; Turpentine, 6,303 barrels against 8,865 barrels; Bones, 3,828 tons, against 2,021 tons. Linseed oil has further declined 10s. per ton, closing at 16s. 3d. naked spot; July-Aug. is quoted 16s. 6d.; September-December, 16s. 9d. to 16s. 10½d.; January-April, 17s.; and May-August, 17s. 4½d to 17s. 6d. Export for week ending is 1,720 cwts. Refined cotton oil quiet at 14s. naked spot; July-August offer at 14s 3d., and November-April, 14s. 7½d.; casks 20s. and barrels 30s. per ton extra. Export of refined oil for the week has been 3,480 cwts. Cod oil offers from £16. to £20. per ton. Turpentine unchanged. Olive oil from £28 to £32. per tun. Herring oil offers at £13 10s. per ton. Brown wool grease, £8. per ton. Boiled siccative oil, £11. per ton. Castor oil from 2½d. per pound for first pressure. Locomotive grease, £10. per ton. Margarine, 32s. to 46s, and 48s to 78s.

CAKES.—Linseed cakes, £4. 5s. to £5. 10s. per ton. Cottonseed cakes, £3 10s. to £3. 15s. per ton. Black Sea rape cakes, £2. 2s. 6d. per ton.

PAINTS.—This trade continues active, with plenty of business moving. White and red leads unchanged, also oxide of zinc. Dry mineral colours, £3. 10s to £8 per ton. Black, blue, red oxide, venetian red, Brunswick green, and yellow ochre paints from £11. Ready mixed paints continue in good demand, from £24. per ton. Imperial black varnish from £5. 10s. per ton. Oak varnish from 5s. 6d. per gallon.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is neglected, there being practically no sales either in spot or forward positions. Olive continues in moderate request, the demand being mainly for the better qualities, at unaltered prices. Linseed is quiet, prices ranging from 18s to 19s. 6d. for Liverpool makes, in export casks, according to quality. Cottonseed is steadier at 16s. to 16s. 6d. for Liverpool refined, and 16s. 6d. for American. Castor oil keeps very firm: Good seconds Calcutta are quoted 3¼d., at which business has been done; first pressure French cannot be had for less than 2⅝d. per lb. Tallow, with the exception of home-melted, is quiet; the former is offered at 18s to 20s per cwt., according to quality. Resin is steady: The highest grades are held for 6s. 6d., and common keeps firm at 4s. 9d. per cwt. Spirits of turpentine are down, spot value now being 20s. per cwt, and quiet thereat. Petroleum is firm, with a better business doing in refined, but quotations at the moment are purely nominal.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 15s.; French, f.c., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

New Companies.

British Arsenic Mines, Ltd.—CAPITAL, £50,000., in shares of £1. each. This company has been formed to acquire mines under an agreement with the Beta Mining Syndicate, Limited, Devonshire, and to mine arsenic and tin. The subscribers to the memorandum of association are:—J. E. S. Michael, 23, Birchin-lane, E.C., solicitor; A. W. Barnett, 37, Church-street, Clapham, gentleman; E. W. Hailes, 155, Ladywell-road, Lewisham, S.E., clerk; F. A. Dawson, 43, Lausanne-road, New Cross, clerk; P. W. Everett, 13, Sash-road, Upper Clapton, N.E., clerk; F. F. E. Keyse, 50, Bow-lane, E.C., merchant; S. Hodgkinson, 14, Furnival's Inn, E.C., agent.

Petroleum Proprietary, Ltd.—CAPITAL, £25,000., in £1. shares. This company has been formed to explore and test ground for oil, and deal in all kinds of petroleum. The subscribers to the memorandum of association are:—F. Steineman, Winchester House, E.C., secretary; T. T. Blanchard, 25, Huntley-street, W.C., clerk; J. T. Thompson, 116, Nevill-road, Stoke Newington, gentleman; H. V. Powney, 69, Highbury Hill, N., gentleman; F. R. Wolseley, 68, Brownhill-road, Catford, gentleman; R. W. Smith, Nunhead, clerk; C. H. Watson, Winchester House, E.C., clerk.

Rochdale Rhea Fibre Spinning Co., Ltd.—CAPITAL, £75,000., in £1. shares. This company has been formed to carry on the business of rhea fibre spinners and merchants, at the Castleton Works, Rochdale. The subscribers to the memorandum of association are:—J. H. Oliver, 93, Whyteville-road, Forest Gate, E., accountant; W. Brider, 21, Cottage-lane, City-road, E.C., clerk; J. C. Jewell, 34, Kelvin-road, Highbury, N., clerk; H. W. Goodman, 86, Leadenhall-street, E.C., merchant; W. Banyard, 12, Leadenhall Buildings, E.C., agent; D. C. Craigie, 1, Nightingale-square, Balham, solicitor; J. J. Watts, St. Stephen's-road, Hounslow, secretary.

Salar del Carmen Nitrate Syndicate, Limited.—CAPITAL, £110,000, in £5. shares. This company has been formed to acquire and work nitrate grounds of the same name in the province of Tarapacea. The subscribers to the memorandum of association are:—W. T. Morrison, 57, Albert Gate Mansions, Hyde Park, gentleman; H. W. Sillem, Brengarten, Woking, Surrey, gentleman; A. Naylor, Amwell Bury, Ware, Herts, gentleman; J. Macandrew, 10 De Vere Gardens, Kensington, gentleman; A. Williamson, 19, James-street, Liverpool, merchant; A. W. Rowe, Dashwood House, E.C., merchant; T. V. Anthony, 53, New Broad-street, E.C., broker.

Scott Vogt Chemical Co., Ltd.—CAPITAL, £150,000., in £1. shares. This company has been formed to trade as chemical manufacturers and manufacturers of chlorine and kindred products. The subscribers to the memorandum of association are:—J. N. Cuthbertson, knight, 29, Bath-street, Glasgow, chemical and produce broker; D. Richmond, City Tube Works, Glasgow, iron tube manufacturer; J. U. Primrose, Centre-street Mills, Glasgow, merchant miller; T. Dunlop, 70, Wellington-street, Glasgow, shipowner and flour merchant; A. R. Scott, 10, Hillside Gardens, Glasgow, chemical manufacturer; T. Henderson, 493, Victoria-road, Glasgow, chemical broker; W. B. Galbraith, 107, Buchanan-street, Glasgow, C.A.

Bryan Corcoran, Ltd.—CAPITAL, £20,000., in £10. shares. This company has been formed to acquire the business of engineer, wire worker, machinist, &c., carried on by B. Corcoran, at 31, Mark-lane, and elsewhere. The subscribers to the memorandum of association are:—B. Corcoran, 31, Mark-lane, E.C., engineer; Mrs. L. Corcoran, Chestnuts, Sutton; Mrs. J. J. Corcoran, 2, Alwyn-square, Canonbury; Mrs. W. M. Browne, Chestnuts, Sutton; Miss J. R. Corcoran, Chestnuts, Sutton; W. J. Dey, 17, Philpot-lane, E.C., merchant; B. Pontifex, 116, St. Paul's-road, Highbury, C.A.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

W. G. BLAGDEN and V. BLAGDEN, chemical brokers, Fenchurch Avenue E.C., under the style of W. G. Blagden.

J. COOKE and S. NICHOLLS, tanners and currriers, Stourport, under the style of Cooke and Nicholls.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending June 27th.

Acetate of Lime
U. States, 1,555 bgs. — Johnson & Hooper

Acetic Acid—
Belgium, 49 pks. — Beresford & Co.
Holland, 256 — A. & M. Zimmermann
" 139 — Little & Johnston

Acetone—
Holland, 1 ck. — G. Rahn & Co.

Alkali—
France, 140 c. — J. Barber & Co.

Alum—
Holland, 75 cks. — R. W. Greeff & Co.

Anthracene—
France, 8 cks. — Hernu, Peron & Co.

Arsenic—
France, 7 cks. — A. Carey

Asbestos—
Germany, £55 — Craven & Co.

Barytes—
Germany, 44 cks. — W. Harrison & Co.
Holland, 57 — D. Storer & Sons
Belgium, 400 bgs. — Burrell & Co.
Holland, 82 — J. L. Lyon & Co.
Germany, 16 — Steinhoff, Sons & Co.
Holland, 110 — W. Harrison & Co.
" 6 — H. Keller & Co
Belgium, 28 — A. Zumbeck & Co.
" 23 — W. Harrison & Co.
" 26 — J. L. Lyon & Co.

Bone Meal—
E. Indies, 147 t. — ——
" 300 — A. Hunter & Co.

Caoutchouc—
Rangoon, 240 c. — L. & I. D. Jt. Co
Singapore, 1 — Nat. S. S. Co
U. S. Columbia, 16 c. — Stiebel Brs.
Germany, 1 c. — Craven & Co.
Aden, 1 — Major & Field
Germany, 3 — L. & I. D. Jt. Co.
France, 20 — H. Johnson & Sons
Rep. Col'mbia, 1 — Stiebel Brs.
France, 6 — W. M. Smith & Sons
Singapore, 1,920 — Ross & Deering

Carbolic Acid—
Holland, 33 pks. — J. Owen
Germany, 72 7 drs. — Krager, Back & Co.

Castor Oil—
France, 30 cs. — C. Windschuegl & Co.

Caustic Potash—
Belgium, 7 drs. — Petri Brs.
Germany, 100 — J. M. Steel & Co.
France, 4 cks. — Macintosh & Co
" 100 c. — Petri Brs.

Chemicals *(otherwise undes.)*—
Denmark, £49 — Crosse & Blackwell
Holland, 41 — F. Boehm
Belgium, 65 — Société John Cockerill
France, 103 — Flageollet & Co
Germany, 4 — H. Lambert
Holland, 45 — J. Barber & Co.
" 6 — Corbyn, Stacey & Co.
Germany, 55 — L. & I. D. Jt. Co
" 152 — T. H. Lee
" 1,152 — A. & M. Zimmermann
Lyttelton, 13 — T. H. White & Co.

Chrome Yellow—
Germany, 2 cks. — Spies Brs. & Co.

Citrate of Lime—
Italy, 23 cks. — Thames S. Tug & L. Co.

Cream of Tartar—
Spain, 9 cks. — C. Webster
France, 3 — M. Ashby, Ld.
" 15 — B. & F. Wf. Co.
Spain, 10 — "
" 4 — W. C. Bacon & Co.
France, 5 — "
Italy, 2 — "

Dyestuffs—
Argols
France, 10 bgs. — B. & F. Wf. Co.
Italy, 206 — Thames S. T. & L. Co., Ld.
Spain, 1,063 — B. Jacob & Sons
Cutch
Rangoon, 250 bxs. — A. B. Curtis & Co.
Divi Divi
E. Indies, 98 bgs. — R. & J. Henderson
Extracts
France, 50 cks. — L. J. Levinstein & Sons
Gambier
Singapore, 731 bls. — Adamson, Gilfillan & Co.
E. Indies, 172 bgs. — L. & I. D. Jt. Co.
Singapore, 182 — G. R. Haller
" 459 bls. — J. Greig
Indigo
E. Indies, 54 chts. — L. & I. D. Jt. Co.
" 18 — Parsons & Keith
" 2 — Binny & Co.
" 13 — Walker, Munsie & Co.
Belgium, 1 — Société John Cockerill
E. Indies, 2 — F. W. Heilgers & Co.
" 39 — Schonlank, Engel & C

Myrabolams
E. Indies, 616 bgs. Dalton & Young
" 344 Baxter & Hoare
" 263 J. Graves
" 645 A. J. Humphery
" 989 L. & I. D. Jt. Co
" 645 H. K. Daniels
" 970 J. Greig

Tanners' Bark
Natal, 21 t. Beresford & Co.
" 60 E. J. Winser & Co.
" 13 A. & W. Nesbitt
Belgium, 30 Leach & Co.
France, 1 C. Atkins & Nisbet
Melbourne, 100 Dyster, Nalder & Co.
Sydney, 98 L. & I. D. Jt. Co

Valonia
A. Turkey, 21 t. Leach & Co.
" 50 W. H. Mitchell
" 52 Anning & Cobb
" 171 A. & W. Nesbitt
" 125 Hicks, Nash & Co.
" 50 Boutcher, Mortimore & Co.
" 56 Adams Brs.

Dyestuffs *(otherwise undescribed)*
France, 1 ck. J. Burnett & Sons
France, 2 cs. Hernu, Peron & Co.
B. W. I., 1 L. & I. D. Jt. Co.

Farina—
Holland, 100 bgs. J. Anderson & Co.
Germany, 100 T. H. Lee
Holland, 100 Seaward Brs.
Holland, 53 J. Knill & Co.
Germany, 100 Ohlenschlager Brs.

Glucose—
U. States, 500 pks. 500 c. W. Balchin
" 250 250 C. S. Lovell
" 250 250 Thames S. Tug & L. Co. Ld.
" 250 250 Trier, Meyer & Co.
" 500 500 Gillman & Spencer, Ld.
" 250 250 Union Ltge Co.
" 600 600 Fellows, Morton & Co.
" 150 890 Deering & Robottom
" 24 144 Page, Son & East
Germany, 175 1 400 M. D. Co.
U. States, 500 500 R. G. Hall & Co.
" 500 225 Humphery & Co.
" 525 638 Ohlenschlager Brs.
Germany, 50 420 J. Knill & Co.

Glue—
— £1,185 ——

Guano—
Peru, 1,080 t. Anglo-Contl. G. Wks.

Lamp Black—
U. States, 50 hds. L. & I. D. Jt. Co.
Sweden, 210 pks. Willis & Co.

Lead Acetate—
France, 11 cks. F. Smith

Magnesia—
Germany, 3 cs. D. W. Greenhough & Sons

Magnesium Sulphate—
Germany, 105 cks. T. H. Lee

Manganese—
Japan, 25 t. Elkan & Co.

Manure—
Germany, 10 t. Anderson, Weber, & Co.
E. Indies, 125 A. Hunter & Co.
Germany, 22 A. J. Luke & Co.

Metallic Oxide—
Germany, 6 cks. Brit. Anti-Fouling C. Co.

Methyl Alcohol—
Germany, 18 dms. Lister & Biggs

Molasses—
U. States, 100 cks. Deering & Robottom

Ochre—
Holland, 11 pks. 6 cs. Phillipps & Graves
U. States, 70 brls. Page, Son, & Co.

Phosphate Rock—
Belgium, 30 t. Chemical Works (Late H. & E. Albert)
" 210 West & Penrose
U. States, 2,227 Anglo-Contl. G. Wks.

Pitch—
Sweden, 4 brls. Tegner, Price, & Co.

Plumbago—
Ceylon, 389 cks J. Thredder, Son, & Co.
" 82 R. G. Hall & Co.
" 68 Hoare, Wilson, & Co
" 84 Vokins & Co.
" 104 G. R. Haller

Potash—
Canada, 43 c 16 brls. M. D. Co.

Potassium Bicarbonate—
Germany, 22 c. H. Lambert

Potassium Carbonate—
Germany, 105 c. Beresford & Co.
France, 23 R. G. Hall & Co
" 60 Petri Brs.

Potassium Sulphate—
Germany, 122 bgs. Bessler, Waechter, & Co.

Pumice Stone—
Italy, 4 t. W. J. Davies & Sons

Pyrites—
Spain, 850 t. C. L. Vasey & Co.

Rosin—
U. States, 502 brls. C. Tennant, Sons, & Co.

Saltpetre—
Germany, 69 cks. P. Hecker & Co.
" 80 J. Hall & Son
E. Indies, 1,167 bgs. Lucas & Spencer's Wf., Ltd.

Soda—
Holland, 82 c. J. Owen
Belgium, 4,000 R. Waters

Sodium Acetate—
Holland, 32 cks. H. Lorenz

Sodium Hyposulphite—
Holland, 400 c. R. W. Greeff & Co.

Starch—
Belgium, 470 cs. A. Brown
" 360 Leach & Co.
" 280 Taylor Brs
U. States, 100 bgs. Beck & Pollitzer
190 bxs. 25 brls.
Holland 932 Little & Johnston
" 120 Phillipps & Graves
Germany, 910 Horne & Co.
France, 8 brls. Beck & Pollitzer
Holland, 6 cs. A. & E. Piggott
Belgium, 200 Sawer, Sons, & Co.
U. States, 100 bgs. Ohlenschlager Brs.
Belgium, 496 cs. T. H. Lee
Germany, 400 C. Tennant, Sons, & Co.

Stearine—
Belgium, 50 bgs. H. Hill & Sons
France, 100 "
" 80 sks. H. Walbaum & Tosetti

Sulphur—
France, 12 t. Taylor Brs.

Talc—
Norway, £10 W. M. Smith & Sons

Tar—
France, 66 brls. J. Burnett & Sons

Tartaric Acid—
Holland, 4 pks. H. Lorenz
" 8 City Coml. Wf.
" 6 drs. B. & F. Wf. Co.
Spain, 20 W. C. Bacon & Co.
France, 19 pks. F. C. Devon & Co.

Ultramarine—
Holland, 40 cs G. Rahn & Co.
" 40 cks Hernu, Peron, & Co.
" 40 pks. Thames S. T. & L. Co., Ltd.

Varnish—
U. States, 12 pks. Dawson Brs.

Verdigris—
France, 1 ck. L. Lorenz

White Lead—
Holland. 62 cks. E. J. Diggins & Co
Belgium, 43 brls. Burrell & Co.
" 8 J. L. Lyon & Co.
Holland, 50 cks. T. & W. Farmiloe
Germany, 2 P. Jantzen
" 49 F. G. Clifford
" 30 W. & A. Hampton
France, 20 J. Watt & Son

Wood Pulp—
Sweden, 2,032 pks. E. J. & W. Goldsmith
" 12 Phillipps & Graves
" 500 Moreton Cox & Co.
" 80 L. Knoblauch
" 3,511 Henderson, Craig, & Co.
Norway, 3,862 Moreton Cox & Co.
" 80 Page, Son, & East
" 160 W. G. Taylor & Co
Germany, 19 Thames S. T. & L. Co.
Norway, 250 Tough & Henderson
Holland, 108 Beadle Brs.
" 260 Phillipps & Graves
Belgium, 1,586 E. J. & W. Goldsmith
Norway, 300 W. E. Bott & Co.
Belgium, 40 Tough & Henderson

Zinc Oxide—
Holland, 50 cks. J. Matton
France, 20 brls. M. Ashby, Ltd.
Holland, 225 "
U. States, 200 "
Germany, 100 "
" 50 R. W. Greeff & Co.

Zinc Sulphate—
Germany, 32 cks. Beck & Pollitzer
" 38 Stobbs, Wilson, & Co

Zinc White—
Holland, 20 cks. Burrell & Co.
" 10 J. Barber & Co.

LIVERPOOL.

Week ending June 25th.

Acetate of Lime—
New York, 1,174 bgs.

Alumina—
Lisbon, 23 bgs. Edwards Brs.

Ammonia—
Rotterdam, 2 cs

Asbestos—
Quebec, 1,200 bgs.
Rotterdam, 7 bls.

Barytes—
Antwerp, 15 cks.

Bones—
M. Video 980 t.

Borate of Lime—
New York, 4,326 bgs. Balfour Williamson

Chemicals *(otherwise undescribed)*
Rotterdam, 10 kgs.

Colours—
Antwerp, 1 ck. 2 cs.
Paris, 5
Rotterdam, 14 2

Cottonseed Oil—
New York, 150 brls.

Dextrine—
Hamburg, 130 bgs.

Dyestuffs—
Divi Divi
Santo Domingo, 487 sks. Frame, Alston & Co.

Fustic
Tampico, 4,036 ps. W. H. Thompson & Co.

Orchella
Lisbon, 35 bgs. Edwards Brs.

Valonia
Smyrna, 1,867 bgs. 126 t.
" 150 50 Barry Brs.
" 52 G. Essayan & Co.
" 40 Mavro, Valieri & Co.
" 140 C. Babiorian & Co.
" 3
Aliko, 900 Papayanni & Jeremias

Glucose—
Baltimore, 75 brls.
Newport News, 100
New York, 494

Glue—
Rotterdam, 4 cks. 3 cs. 80 bgs.
Rouen, 10 Co.-op. W'sale Society, Ld.
Hamburg, 20 bgs.

Iron Oxide—
Trieste, 16 brls. Gabour Brs.

Limestone—
Antwerp, 1 crt. 1 cs. J. T. Fletcher & Co.

Manganese Ore—
Poti, 2,090 t. Darwen & Mostyn Iron Co.

Manure—
Malta, 43 bgs.

Minium—
Rotterdam, 109 cks.

Naphtha—
New York, 3,500 brls.

Paint—
Philadelphia, 9 bxs. T. Robinson & Co.
Christiania, 1 cs. R. Sanderson & Co.

Paraffin Scale—
New York, 722 brls. Thompson & Bedford

Potash—
Antwerp, 15 dms.
Dunkirk, 6 12 cks. 11 brls.
Rouen, 5 Co.-op. W'sale Society, Ld.

Pyrites—
Huelva, 1,807 t. Matheson & Co.

Rosin—
Boston, 1,500 brls.

Soap—
Newport News, 500 brls.
Smyrna, 25 cs.

Soapstone—
Philadelphia, 100 bgs
Bordeaux, 500 G. G. Blackwell, Sons & Co.

Sodium Chlorate—
Havre, 13 kgs. Cunard S. S. Co., Ld.

Sodium Silicate—
Rotterdam, 3 cks.

Starch—
Baltimore, 20 bgs.
Antwerp, 205 cs. J. T. Fletcher & Co.
New York, 4 brls. L. & N. W. Rly Co.
Rotterdam, 202
Boston, 10 bdls. J. Armstrong & Co.

Stearine—
New York, 25 hds.

Sulphur Oil—
Bari, 38 brls.

Tallow—
Montreal, 250 tcs
River Plate, 235 pps. 40 hf.-pps.
Rouen, 147 bgs Co-op. W'sale Society, Ld.
Boston, 30
" 242 Stolterfoht, Sons & Co.

Tartar—
Bordeaux, 10 cks.

Tartaric Acid—
Rotterdam 4 cks.
Marseilles, 20 brls.
Bari, 20

Treacle—
Bordeaux, 2 cs.

Ultramarine—
Rotterdam, 20 cks.

Varnish—
Philadelphia, 1 brl. T. Robinson & Co.
Rotterdam, 8 pks.

Waste Salt—
Hamburg, 986 bgs.

White Lead—
Ghent, 11 brls.
Antwerp, 25 cks. J. T. Fletcher & Co.
Rotterdam, 9 J. Mathew & Co.
" 18

Wood Pulp—
Oporto, 260 bdls. Camna Timber Est. Co.
Quebec, 1,050
Drammen, 40 bls.

Zinc Oxide—
Antwerp, 110 brls.
Rotterdam, 45 cks.
New York, 80

Zinc White—
Rotterdam, 200 cks.

MANCHESTER.

Week ending June 27th.

Albumen—
Paris, 10 cs.

Alumina Sulphate—
Rotterdam, 14 cks.

Aniline Colours—
Paris, 5 cks.

Aniline Salt—
Rotterdam, 3 cks.

Antimony Salts—
Rotterdam, 2 cks.

Barytes—
Rotterdam, 29 cks. 50 bgs.

Bone Ash—
Rio Grande do Sul, [illegible]

Caustic Potash—
Hamburg, 20 dms.
Colours—
Rotterdam, 13 cks. 31 cs. 11 bxs. 92 brls.
Boulogne, 9
Antwerp, 2
Paris, 8
Cream of Tartar—
Rotterdam, 18 cks.
Dyestuffs—
Alizarine
Rotterdam, 15 cks.
Cutch
Paris, 4 cs.
Farina—
Rotterdam, 425 bls.
Hamburg, 175 bgs.
Stettin, 650 Browne, Geveke, & Co.
" 2,132
Glucose—
Stettin, 194 cks. 200 bgs.
Glue—
Rotterdam, 1 ck. 40 cs. 192 bgs. 7 bls.
Antwerp, 19 W. Harrison & Co.
Treport, 95 bgs.
Stettin,
Litharge—
Rotterdam, 2 cks.
Potash—
Treport, 103 cks. United Alkali Co
" 21 dms. S. W. Royse & Co.
Potassium Chloride—
Hamburg, 38 cks.
Starch—
Antwerp 10 cs. J. T. Fletcher & Co.
" 138
Hamburg, 184
Sulphuric Acid—
Rotterdam, 12 cks.
Tartaric Acid—
Rotterdam. 20 kgs.
Ultramarine—
Rotterdam 4 cks.
Waste Salt -
Hamburg, 202 bgs
White Lead—
Rotterdam, 14 cks.
Wood Pulp—
Rotterdam, 76 bls 180 pks.
Gefle, 5,010 Henderson, Craig, & Co.
Zinc Ashes—
Hamburg, 8 cks.
Stettin, 14
Zinc Oxide—
Antwerp. 10 brls
Rotterdam, 20

HULL.

Week ending June 27th.

Albumen—
St. Petersburg, 65 cs. Wilson, Sons, & Co., Ld.
Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Barytes—
Rotterdam, 48 cks. Hutchinson & Son
Antwerp, 43 Wilson, Sons, & Co., Ld.
Hamburg, 20 Bailey & Leetham
" 11 Tudor & Sons
Rotterdam, 65 W. & C. L Ringrose
" 53 bgs. Reckitt & Sons
Antwerp, 105 Bailey & Leetham
" 41 cks. H. F. Pudsey
Chemicals *(otherwise undescribed)*
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Antwerp, 2 brls. 54 pks. "
Hamburg, 31 "
Rotterdam, 1 ck. "
China Clay— 2 Hutchinson & Son
Hamburg, 100 cks.
Chloride of Iron—
Rotterdam, 3 cks. W. & C. L. Ringrose
Cod Oil—
Bergen, 3 brls. Wilson, Sons, & Co., Ld.
Aalesund, 5 "
Colours—
Rotterdam, 7 cks. Hutchinson
2 brls. 1 cs. & Son
" 6 " Wilson, Sons, & Co., Ld.
Dunkirk, 9 "
Antwerp, 15 pks. "
" 4
Hamburg, 6 cs. G. Malcolm & Son
Danzig, 13 cks.
Amsterdam, 4 Hutchinson & Son
Rotterdam, 25 brls. 1 bx. W. & C. L.
13 cs. 71 pks. Ringrose
Bremen, 2 cks. Veltmann & Co.
" 4 J. Pyefinch & Co.
" 4 Blundell, Spence, & Co
" 8 Sissons Brs & Co.
" 8 W. S. Merrikin
" 4 Storry, Smithson, & Co.
Antwerp, 2 Sissons Brs. & Co.
Hamburg, 3 Wilson, Sons, & Co., Ld.
Cream of Tartar—
Rotterdam, 2 cks. W. & C. L Ringrose
Dextrine—
Stettin, 60 bgs. Wilson, Sons, & Co , Ld.
" 50
Dyestuffs—
Alizarine
Rotterdam, 2 cks. W. & C. L.
13 brls. Ringrose
Logwood
Hamburg, 20 bls. Wilson, Sons, & Co., Ld.
Madder
Rotterdam, 2 cks Hutchinson & Son
" 3 W. & C. L. Ringrose
Farina—
Antwerp, 30 bgs. Wilson, Sons, & Co., Ld.
Ghent, 292 pks. "
Stettin, 280 "
Hamburg, 200
Glucose—
New York, 2,000 bgs. 299 brls.
Stettin, 200 Wilson, Sons, & Co., Ld.
Glue—
Dunkirk, 5 cks. Wilson, Sons, & Co., Ld.
Rouen, 12 27 bls. Rawson & Robinson
Potterdam, 4 cs. W. & C. L. Ringrose
Stettin, 40 bgs. Wilson, Sons, & Co., Ld.
Antwerp, 13 pks. Bailey & Leetham
Kaolin—
Amsterdam, 20 cks. Hutchinson & Son
Mica—
Hamburg, 1 cs. Wilson, Sons, & Co., Ld.
Ochre—
Rouen, 60 cks. Rawson & Robinson
Paint—
Christiania, 12 cs. Wilson, Sons, & Co., Ld.
Phosphate—
Ghent, 816 bgs. Wilson, Sons, & Co., Ld.
Pitch—
Amsterdam, 13 cks. W. & C. L. Ringrose
Antwerp, 2 J. M. Hamilton & Co.
Plumbago—
Hamburg, 9 cks. Bailey & Leetham
Potash—
Rotterdam, 20 cks. W. & C. L. Ringrose
Pumice Stone—
Hamburg, 3 cs. Wilson, Sons, & Co., Ld
Rosin—
Hamburg, 10 cks. Wilson, Sons, & Co., Ld.
Salt—
Hamburg, 7 cks. Wilson, Sons, & Co., Ld
Saltpetre—
Hamburg, 5 cks.
Soap—
New York, 1,100 bxs. Wilson, Sons, & Co., Ld.
Soda—
Hamburg, 90 bgs. Wilson, Sons, & Co., Ld.
Starch—
Antwerp, 55 cs. Wilson, Sons, & Co., Ld.
Bremen, 2,014 Veltmann & Co.
Stearine—
Antwerp, 48 bgs. Wilson, Sons, & Co , Ld.
Boston, 22 brls.
Tallow—
Dunkirk, 30 brls Wilson, Sons, & Co., Ld.
Boston, 493 73 tcs. "
New York, 150 "
Tar—
Stockholm, 10 brls. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 4 cks. Hutchinson & Son
Treacle—
Boston, 200 brls Wilson, Sons, & Co., Ld.
New York, 976 "
Ultramarine—
Rotterdam, 20 cks. Hutchinson & Son
" 1 W. & C. L. Ringrose
Varnish—
New York, 46 brls. 10 pks. Wilson, Sons, & Co , Ld.
White Lead—
Rotterdam, 82 cks. Hutchinson & Son
Amsterdam, 87 W. & C. L. Ringrose
" 23 Hutchinson & Son
Antwerp, 22 Bailey & Leetham
Wood Pulp—
Helsingfors, 80 bls. J. Good & Sons
" 148
Stockholm, 237
Konigsberg 100 Bailey & Leetham
Bergen, 390 pks. Wilson, Sons, & Co. Ld.
Stettin, 40 "
Drontheim, 400 "
Gothenburg, 732 "
Hamburg, 210 "
Christiania, 978 "
New York, 1,600 bdls.
Zinc White—
Rotterdam, 25 cks. Hutchinson & Son

GLASGOW.

Week ending July 2nd.

Albumen—
Genoa, 14 cs.
Hamburg, 2 cks.
Alumina Sulphate—
Antwerp, 100 bgs.
Rotterdam, 43 cks. J. Rankine & Son
Aniline—
Hamburg, 3 cs.
Aniline Salt—
Rotterdam, 10 cks. J. Rankine & Son
Arachide Oil—
Rotterdam, 2 cks. J. Rankine & Son
Asbestos—
Genoa, 20 cs.
Montreal. 50 bgs.
Barium Sulphate—
Antwerp, 50 bgs.
Barytes—
Rotterdam, 64 cks. J. Rankine & Son
Hamburg, 64
Castor Oil—
Antwerp, 91 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 3 cks. J. Rankine & Son
Hamburg, 6 cs.
Chromium Fluoride—
Rotterdam, 20 cs. J. Rankine & Son
Colours—
Rotterdam 2 bxs. 4 cs. 4 cks. 17 brls. J. Rankine & Son
Hamburg, 3 3
Antwerp, 3 3
Rotterdam, 50 pks.
Cottonseed Oil—
New York, 100 brls.
Dyestuffs—
Alizarine
Rotterdam, 143 cks. J. Rankine & Son
" 182 pks.
Extracts
New York, 50 bxs.
Antwerp, 2 cks.
Shumac
Palermo, 1,050 bgs. 20 bls.
Dyestuffs *(otherwise undescribed)*
New York, 1 bx.
Glucose—
New York, 850 brls.
Glue—
Genoa, 20 bgs.
Rouen, 63 cks.
Guano—
Iceland, 878 sks.
Molasses—
New York, 11 brls.
Ochre—
Rouen, 3 cks.
Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son
Potash—
Rotterdam, 21 cks. J. Rankine & Son
Hamburg, 20
Rosin—
New York, 411 brls. 750 bls.
Starch—
Ghent, 40 cs.
New York, 500 bgs.
Rotterdam, 10 J. Rankine & Son
Tallow—
New York, 20 tcs.
Tartaric Acid—
Rotterdam, 5 cks. J. Rankine & Son
Varnish—
Antwerp, 1 cs.
White Lead—
Rotterdam, 139 cks. J. Rankine & Son
Wood Pulp—
Vardo, 880 bls.
Christiania, 1,094
Hamburg, 500
Zinc Oxide—
New York, 200 brls.
Rotterdam, 89 cks. J. Rankine & Son
Zinc Sulphite—
Rotterdam, 1 ck. J. Rankine & Son

TYNE.

Week ending June 27th.

Barium Carbonate—
Rotterdam, 234 bgs. Tyne S. S. Co
Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co
Barytes—
Antwerp. 150 bgs. Tyne S. S. Co.
Castor Oil—
Antwerp, 34 brls. Tyne S. S. Co.
Farina—
Hamburg, 20 bgs. Tyne S. S. Co.
Limestone—
Antwerp, 3 cs. Tyne S. S. Co.
Plumbago—
Hamburg, 4 cks. Tyne S. S. Co.
Pyrites—
Huelva, 1,987 t. Scott Brs.
Starch—
Rotterdam. 138 cs. Tyne S. S. Co.
Tartaric Acid—
Rotterdam, 8 cks. Tyne S. S. Co.
Varnish—
Antwerp, 4 kgs. Tyne S. S. Co
Wood Pulp—
Gothenburg, 162 bls.
Zinc Oxide—
Antwerp 5 brls. Tyne S. S. Co.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 1st.

Ammonia—
Brisbane, 9 c. £140
Bombay, 1 cs. 11

Ammonium Carbonate –
B. Ayres, 25 cs. £37
Rouen, 71 pks. 282
St. Petersburg, 5 t. 140
New York, 1 14 c. 48

Ammonium Chloride—
Shanghai, 1 t. 19 c. £72
Mersyne, 10 18
Dusseldort, 1 10 35
Bushire, 14 25
Ghent, 4 cks. 23
Samsoun, 1 10 51

Ammonium Sulphate—
Genoa, 330 t. £2 805
Hamburg, 200 1,640
Ghent, 100 800

Amorphous Phosphorus—
E. London, 1 cs. £13

Boracic Acid—
Christchurch, 30 kgs. £45

Borax—
Delagoa Bay, 1 t. £19

Calcium Chlorate—
Brisbane, 174 drs. £112

Carbolic Acid—
Delagoa Bay, 20 cks. £11
Calcutta, 28 drs. 20
Hiogo, 100 315

Carbon Bisulphide—
Sydney, 100 dms. £44

Carbonic Acid Gas—
Rotterdam, 12 tubes £36

Caustic Potash—
Wellington, 1 t. 10 c. £47

Caustic Soda—
Philadelphia, 16 t. 15 c. £175
E. London, 5 22
Durban, 13 26
Sydney, 4 19 48
Natal, 10 13
Melbourne, 1 1 38

Chemicals *(otherwise undescribed)*
Bombay, 1 t. 1 c. £68
Wellington, 4 kgs. 1 ck. 27
Dunkirk, 6 75
Melbourne, 1 3 13 3 cs. 173
Harlingen, 11 33
Sydney, 10 21

Citric Acid—
Rotterdam, 16 kgs. 5 c. £133
Hamburg, 5 4 brls 161
Amsterdam, 2 1 25
Brussels, 24 3 cks. 225
Odessa, 10 70
Danzig 4 26
Genoa, 10 60
Oporto, 7 46
Pert' 5 31
St. Petersburg, 1 3 4 76
Natal, 3 19

Coal Products—
Alizarine
Lyttelton, 5 cks. £78
Aniline Dyes
Sydney, 1 cs. £10
Tientsin, 25 90
Aniline Oil
New York, 28 drs. £1,000
Ghent, 2 cks. 30
Aniline Salt
New York, 20 cks. £150
Anthracene
Cologne, 165 cks. £2,056
Benzol
Hamburg, 25 runlts. £100
Rotterdam, 97 cks. 449
Amsterdam, 30 drs. 311
Creosote
New York, 500 cks. £220
Nitro-naphthaline
Brussels, 3 cks. £25
Pitch
Antwerp, 1,763 t. £3,126
Newport News, 2,000 bgs. 560
Hochfeld, 505 1,023
New York, 253 cks. 127
Pyridine Bases
Amsterdam, 5 drs. £121
Toluol
Amsterdam, 50 cks. £213

Copper Sulphate—
Dunedin, 1 t. 5 c. £22
Bordeaux, 35 608
Treport, 5 2 85
Hobart, 4 82

Copperas –
Constantinople, 27 t. 3 c. £60

Cream of Tartar—
Yokohama, 1 t. £102
Sydney, 1 100
Natal, 5 c. 28
Fremantle, 8 cs. 15 1 tank 132
Melbourne, 1 97
Wellington, 10 48

Disinfectants—
Colombo, 52 pks. £18
Hamburg, 10 cks. 50
Algoa Bay, 2 t. 18
Sydney, 17 cs. 2 70

Disinfectants and Sheep Dip—
Sydney, 2 t. 11 c. £48

Iodine—
Dunkirk, 12 c. £350

Manure—
Madeira, 10 t. £50
Montreal, 2 15 c. 20
Antwerp, 20 110
Timaru, 50 680
Melbourne, 3 8 30
Chinde, 10 50
Lyttelton, 375 2,150
Wellington, 100 1,340
Auckland, 75 10 745
Malaga, 25 10 175

Nitric Acid—
Cape Town, 4 c. £12

Oxalic Acid—
Adelaide, 11 c. £13

Phosphorus—
Melbourne, 5 cs. £52

Potash –
B. Ayres, 10 c £14

Potash Crystals—
Melbourne, 5 cs. £28

Potassium Bicarbonate –
Philadelphia, 11 c £14
Yokohama 10 14
Piræus, 2 t. 10 114

Potassium Chlorate—
E. London, 10 kgs. £20
Hamilton. Ont., 10 c. 23

Potassium Cyanide—
Sydney, 10 c. £70

Potassium Prussiate –
Antwerp, 2 cks. £40
Barcelona, 8 t. 15 c. 574
Gothenburg, 1 2 72
New York, 10 176
Genoa, 4 57
Yokohama, 10 33

Saltpetre—
Hamilton, Ont., 11 c. £14
Santos, 26 t. 16 636
Algoa Bay, 9 10
Oporto, 3 4 76
Natal, 1 4 25
Sydney, 3 70

Sheep Dip—
Algoa Bay, 500 cs. £1,000
Melbourne 500 drs. 200 cks 50 kgs. 788
Natal, 1,000 dms. 6 t. 13 c. 406
B. Ayres, 16 t. 1 186 dms.
100 bgs. 1,100 cs. 3,726
Galveston, 500 1,000

Soda –
Natal. 10 t. 5 c. £10

Soda Ash—
Launceston, 3 t. 10 c. £14

Soda Crystals—
Adelaide, 10 t. 4 c. £24

Sodium Bicarbonate—
Pt. Elizabeth, 1 t. 5 c. £9
Fremantle, 17 36
Sydney, 32 8 205

Sodium Hyposulphite –
Boston, 10 t. 2 c. £57

Sodium Prussiate—
Montreal, 6 cks. £93
Hamburg. 1 16

Sodium Sulphate –
Ghent, 55 t. £55

Sodium Tartrate—
Oporto, 3 c. £14

Strontium Carbonate—
New York, 50 kgs. £80

Sulphur—
E. London, 100 cks. £66
Pt. Elizabeth, 10 t. 6 c. 96
Melbourne, 3 23
Cape Town, 24 11 233

Sulphuric Acid—
Algoa Bay, 20 dms. £25
Natal, 16 cs. 24
Singapore, 2 t. 24

Superphosphates –
Libau, 491 t. 2 c. £1,300
Timaru, 100 500
Mauritius, 99 3 360

Tartaric Acid—
Fremantle, 3 kgs. 15 c £124
Hamburg, 1 brl. 14
Yokohama, 11 124
Algoa Bay, 4 25
Melbourne, 15 74
Natal, 3 19

LIVERPOOL.

Week ending July 1st.

Acetic Acid—
Lisbon, 2 t. 6 c £14

Alum—
S. Frisco, 9 t. 10 c. £48
Colombo 1 5
B. Ayres, 1 1 2 q 6
Callao, 5 6 26
M. Video, 5 28
Casablanca, 1 5 2 6
Lisbon, 2 8 3 11
Galatz, 5 2 1 31
Singapore, 2 3 12

Ammonium Carbonate—
Genoa, 8 c. £13
Corunna, 4 6
Calcutta, 5 7

Ammonium Chloride—
Catania, 4 c. £7
Messina, 1 t. 35
Colombo, 10 c. 18
Genoa, 1 10 1 q. 25
Alexandria, 2 70
Philadelphia, 14 10 320
Ibrail, 5 1 10
Bari, 1 10 45
Rotterdam, 1 6 27
Montreal, 2 1 41
B. Ayres, 12 23
Beyrout, 1 33

Ammonium Sulphate—
Havre, 30 t. £240
Samarang, 218 2 q. 1,785
Demerara, 5 17 c. 52
Malaga, 51 10 415
Palermo. 25 13 1 210
Barcelona, 10 2 83
Genoa, 25 12 1 210
Venice, 20 10 4 166
Montreal, 10 1 45
Las Palmas, 39 1 1 330
New York 151 2 2 1,359
Valencia, 70 17 2 640
Sourabaya 165 1,298

Aniline Salts—
Boston, 3 t. 18 c. 3 q. £275
Santos, 1 69

Bleaching Powder—
Ancona, 6 cks.
Baltimore, 103
Bombay, 30 bxs. 10 cs.
Bosto i, 565
Cambrai, 18
Genoa, 79
Montreal, 76
Newport News, 69
New York, 310
Oporto, 23
Philadelphia, 62
Rouen, 64
San Sebastian, 27
Venice, 4
Vigo 3

Boracic Acid—
Antwerp, 2 t. 16 c. £56
Dusseldorf, 1 30
Bremen, 5 14 110
Havre, 1 10 3 q. 48
Rotterdam, 10 15

Borax—
Genoa, 1 t. 19 c. 2 q. £39
Halifax, 1 3 2 24
Callao, 3 4 1 64
Hamburg, 7 6 148
E. London, 1 19
Dusseldorf, 14 14
Hobson's Bay, 3 60
Antwerp. 21 8 428
Barcelona, 5 2 102
Christiania, 1 14 3 35
Montreal, 10 1 210
New York, 15 1 1 315
B. Ayres, 1 4 2 25
Rotterdam, 17 16 370

Calcium Chlorate—
Melbourne, 11 t. 1 c. £25
Lagos, 11 2

Carbolic Acid—
Rouen, 3 t. 6 c. 2 q. £29
Barcelona, 1 63
Paris, 19 3 70
Valparaiso, 2 1 11
Rotterdam, 10 8 1,145
Genoa, 6 20
Alexandria, 125 dms. 45

Caustic Potash—
San Francisco, 1 t. 18 c. £60

Caustic Soda—
Adelaide, 102 dms
Amsterdam, 228
Ancona, 10
Arica, 11
Baltimore, 620
Barcelona, 350 40 cks.
Bari, 87
Bilbao, 31
Bombay, 149
Boston, 50
Brisbane, 18
B. Ayres, 40
Calcutta, 36
Cienfuegos, 42
Galatz, 28
Genoa, 58
Hamburg, 314 5 brls.
Havre, 15
Ibrail, 35
Madras, 54
Malaga, 56
Melbourne, 24
Montreal, 150
Naples, 101
New York, 618 21
Philadelphia, 280
Porto Alegre 25
Rangoon, 7
Rio de Janeiro, 7
St John, N B., 35
Saltillo, 35
San Francisco, 5 30 bxs. 20
Santos, 70
Seville, 135
Singapore, 16
Trinidad, 7
Valencia, 25
Varna, 50
Vigo, 30

Chemicals *(otherwise undescribed)*
Barcelona, 16 c. £15
Ferrol, 4 t. 60
Calcutta, 55 16 2 q. 162
Bombay, 11 16 2 59
Boston, 1 19 136
Philadelphia, 13 14 438
B. Ayres, 1 2 5
Malta, 4 cs. 11
Alexandretta, 1 35
Genoa, 1 15 61
Hamburg, 10 17
Newcastle, NSW, 1 30

China Clay—
Boston, 1,690 cks. 336 bgs.
New York. 100

Chromium Trioxide—
Antwerp, 1 t.

Citric Acid—
Corunna, 2 c. £1

Coal Products—
Aniline Colours
Barcelona, 3 cks.
Montreal, 5 kgs.
Aniline Oil
Lisbon, 1 dm.

Aniline Salt
Boston, 13 cks.
Tar
Batavia, 70 cks.
Genoa, 4
Manila, 50 dms.
Sierra Leone, 10 brls.
Sourabaya, 50
Vancouver, 10
Victoria, B.C., 10

Copper Sulphate—
Lisbon, 29 t. 12 c £530
Varna, 1 10 27
Fiume, 1 1 3 q. 18
Constantinople, 1 1 2 18
Messina, 1 2 3 22
Bombay, 15 8
Smyrna, 14 1 13
Halifax, 1 1 18
Lille, 4 19 77
Nantes, 184 16 1 3,198
Rouen, 15 1 13
Paris, 30 3 1 512
Bordeaux, 68 10 1 1,115
Genoa, 12 33 3 205
Cette, 219 17 5,290
Leghorn, 10 158
Venice, 12 7 212
Bari, 10 1 3 180
Naples, 4 16 1 86

Disinfectants—
Madras, 11 c 2 q. £15
Melbourne, 1 t. 20
Bombay, 4 11 51

Gelatine—
New York, 300 bxs.

Guano—
Sourabaya, 15 t. 3 c. 2 q. £150

Gypsum—
New York, 36 t. 4 c. £118

Magnesia—
Coruna, 1 c. 2 q. £5
Bilbao, 3 cks

Magnesium Chloride—
Nantes, 5 t. 3 c. £14

Magnesium Sulphate
Bahia, 10 brls.

Manure—
Kingston (Jam.), 140 bgs. £119
Valencia, 50 t. 11 c. 100
Philadelphia, 97 10 90

Muriatic Acid—
Pernambuco, 1 t. 1 c. £13

Oxalic Acid—
Melbourne, 4 t. 4 c. 1 q £144
Venice, 18 38
Milan, 10 75
Boston, 3 14 111
Newcastle, 2 4 2 71
Lisbon, 11 2 19

Paint—
Accra, 3 cs.
Akassa, 116 kgs.
Alexandria, 96
Bahia, 6 brls.
Baltimore, 185 cks.
Beyrout, 3 51
Bilbao, 4
Bombay, 1
Calcutta, 50 dms.
Callao, 10 17
Cape Town 14 21
Cartagena, N. G., 6 cs.
Cienfuegos, 1
Corinto, 13 pks.
Coruna, 6 dms.
Hong Kong, 250
Kingscove, 72
Lagos, 140
Lanzarote, 4 brls.
Leghorn, 7
Manaos, 10 40 40
Manila, 775
Mayaquez, 2 cks.
M. Video, 8
N. Orleans, 2
New York, 6
Piræus, 8
Rotterdam, 16 c.
Shanghai, 70
Trieste, 18

Painters' Colours—
Boston, 6 cks. 35 kgs. 200 brls.
B. Ayres, 104 cs. 136 60 42
Calcutta, 16
Gothenburg, 100 bgs.
Hamburg, 37 250 600
Hong Kong, 92 10 dms.
Limassol, 3 pks.
Para, 8 tcs. 15 96 44 brls.
Saluora, 3
San Francisco, 10
Toronto, 10 16 4
Valparaiso, 47 cs. 5
Vera Cruz, 100 8

Paraffin Wax—
B. Ayres, 10 cs
Para, 25

Potassium Bichromate—
Ancona, 6 c 1 q. £13
Oporto, 3 t. 8 2 143

Potassium Carbonate—
Rio de Janeiro, 2 t. 8 c. 1 q. £46

Potassium Chlorate—
Melbourne 1 t. 2 c. £46
Christiania, 2 77
Shanghai, 7 10 296
Kalmar, 2 96
Santander, 1 13 69
Melbourne Whf., 1 2 43
Boston, 2 10 98
Rotterdam, 2 4
Gothenburg, 4 158
New York, 34 10 2,122

Potassium Nitrate—
Hamburg, 1 t. 17 c. 1 q. £20

Potassium Prussiate—
Genoa, 1 t. 11 c. 3 q £108

Salt—
Akassa, 320 t.
Amsterdam, 190
Antwerp, 83 18 c.
Bakana, 45
Baltimore, 200
Barbadoes, 25
Benin, 8
Boston, 730
Brisbane, 26 1
B. Ayres, 52 2
Calcutta, 394
Cape Coast, 320 cks.
Cape Town, 182
Christiania, 300
Gd. Bassam, 100 sks.
Iceland, 100
Lagos, 220
Malta, 15
Manaos, 200 bgs.
Melbourne, 192
" 212
Monrovia, 10
M. Video, 2
Montreal, 1,102
Newcastle, 35
New York, 3 6
Philadelphia, 25
Pt. Royal, 1,500
Rangoon, 624
Rotterdam, 120
St John's, N'fd., 10
Sierra Leone, 285 2
Sydney, 2 3
Trinidad, 18
Valparaiso, 1 15
Vera Cruz, 50

Salt Cake—
Antwerp, 80 t. 16 c. £111
Baltimore, 58 15 88

Satinite—
Stettin, 10 t. 12 c. £29

Saltpetre—
Pernambuco, 2 t. 17 c. 1 q £68
Syra, 1 16 3 40
S. Frisco, 4 7 2 95
Callao, 1 24

Sheep Dip—
Pt. Elizabeth. 40 t. £1,250
B. Ayres, 3 10 c. 75

Soap—
Akassa, 25 bxs
Alexandria, 45 cs.
Amsterdam, 150
Antwerp, 200 135
Barbadoes, 1,020
Barranquilla 10
Bombay, 5 3
Boston, 45
Calcutta, 20
Callao, 1
Cape Coast, 65
Cape Lahou, 32
Cape Town, 502
Christiania, 100
Constantinople, 20
Ghent, 60
Gibraltar, 240
Havre, 500
Hong Kong, 40 dms.
Jersey, 28 1
Kingston, 50
Kurrachee, 15
Lagos, 460 192
La Guayra, 2
Las Palmas, 650
Malta, 55
M. Video, 1
Montreal, 570
Naples, 6
New York, 50 250 11 cks.
27 bdls.
Ottawa, 250
Ponce, 25
Pt. Elizabeth, 12
Pt. Natal, 164
Pt. Said, 7
Rotterdam, 31 400
St. John's, N'fd. 170 35 1
St. Thomas, 250
Sapeli, 200
Shanghai, 4 450
Sherbrooke, 320
Sierra Leone, 3
Singapore, 700 200
Sydney, 3,500
Teneriffe, 200
Trieste, 100 brls.
Trinidad, 500 cs.
Valparaiso, 610

Soda Alkali—
Barcelona, 70 brls.
Bilbao, 40
Melbourne, 82
Philadelphia, 167
St. John, N.B., 40

Soda Ash—
Amsterdam, 4 cks.
Antwerp, 110 bgs.
Baltimore, 600
Barcelona, 60
Boston, 280 168 tcs. 36
Brisbane, 4
B. Ayres, 60 kgs. 100
Calcutta, 110
Callao, 28 brls. 50
Caleta Buena, 40
Christiania, 12
Corfu, 50
E. London, 40 kgs.
Gothenburg, 50 36
Hamburg, 22
Hiogo, 81
Kobe, 127
Melbourne, 67
Montreal, 3,988
New York, 700 94 tcs 14
Philadelphia, 200 120 185
Rangoon, 50 brls.
Rio de Janeiro, 50 80
Smyrna, 100 20
Sydney, 11 39
Vigo, 15 cs.
Yokohama, 50 300

Soda Crystals—
Antofagasta, 20 brls.
Barcelona, 8 cks.
Boston, 250 bgs. 420
B. Ayres 50
Calcutta, 65 kgs.
Coquimbo, 30
Demerara, 20
Genoa, 14
Hamburg, 2
Jersey, 35 10
Malaga, 8
Malta, 50
Montreal. 375 175
Philadelphia, 20 10
St. John's, N'fd., 55
Sydney, 50

Soda Oxide—
New York, 25 cs.

Sodium Bicarbonate—
Antwerp, 10 kgs. 2 cks.
Barcelona, 125
Bombay, 360
Boston, 400
Brisbane 100
B. Ayres, 50 bgs.
Calcutta, 950 6
Colombo,
Constantinople, 105 pks.
E. London, 40 20 bgs.
Genoa, 50 4
Halifax, 50
Hamburg, 70 10
Hong Kong, 10
Lyons, 75
Malaga, 40
Malta, 14 20
Melbourne, 100
Montreal, 50
Nagasaki, 200
Naples, 100
Paris, 237 6
Pt. Natal, 20
Rangoon, 50
Rio de Janeiro, 22
Rotterdam, 20
St. John's, N'fd., 20 4
Salonica, 40
San Francisco, 200 60
Seville, 80 pks.
Smyrna, 30 brls.
Trinidad, 25
Valencia, 85
Yokohama, 1,500

Sodium Carbonate—
Boston, 112 brls.
New York, 182
Rotterdam, 50

Sodium Chlorate—
Genoa, 3 brls.
Hamburg, 10 kgs.
New York, 100

Sodium Hyposulphate—
Bilbao, 4 brls.
Savanilla, 20 kgs.

Sodium Hyposulphite—
Bilbao, 1 t. 2 c

Sodium Manganate—
Paris, 2 brls.

Sodium Silicate—
Bilbao, 33 cks.
New York, 10 brls.
Odense, 60
Trinidad, 6 dms.
Zante, 16
Adelaide, 27
Calcutta, 36

Starch—
Constantinople, 6 cs.

Strontia—
Hamburg, 10 t. 1 c.

Sulphur—
Boston, 250 t. 10 c.
Philadelphia, 125 5
Calcutta, 3 1 3 q.
Salaverry, 1 1
Para, 1

Sulphuric Acid—
Pernambuco, 4 c
Constantinople, 3 t. 11
Hamburg, 2 3
Manaos, 7

Superphosphates—
Las Palmas, 10 t.
Nantes, 254

Tartaric Acid—
Sydney, 10 c

Varnish—
Bonavista, 1 brl
Cape Town, 13 cs.
Genoa, 7 cks.
Leghorn, 1
Lisbon, 3
Naples, 2

White Lead—
Bahia, 60 brls.
Pt. Natal, 6 cks. 40 dms.

Whiting—
M. Video, 100 brls.
Brisbane, 50

Zinc Chloride—
Bombay, 21 t.

MANCHESTER

Week ending July 1st.

Alum—
Tripoli, 10 hf.-tcs.
Tunis, 5 cks. 1 brl.

Ammonium Chloride—
Alexandria, 20 brls

Ammonium Sulphate—
Valencia 2,069 bgs.

Aniline Colours—
Rotterdam, 5 cks. 1 cs.
Hamburg, 4

Aniline Oil—
Antwerp, 1 dm.

Aniline Salts—
Barcelona, 25 cks.

Anthracene—
Rotterdam, 39 cks.

Asbestos—
Bombay, 5 cks. 7 kgs

Benzol—
Rotterdam, 60 dms. 26 brls.

Carbolic Acid—
Treport, 6 cks. 116 brls
Rotterdam, 25

Caustic Soda—
Bombay, 60 dms.

Creosote Salts—
Barcelona, 7 cks.
Treport. 41

Dextrine—
Barcelona, 15 bgs.

Dyestuffs (*otherwise unspecified*)
Barcelona, 4 cks.

Gelatine—
Bombay, 1 cs.
Glue—
Antwerp, 10 cks.
Barcelona, 15
Magnesium Sulphate—
Bombay, 150 bgs.
Oxygen—
Treport, 91 tubes
Painters' Colours—
Bombay, 3 kgs.
Pitch—
Cette, 240 t.
Soap—
Barcelona, 4 cks.
Hamburg, 2 pns.
Santah, 25 cs.
Soda Crystals—
Bombay, 170 bgs.
Tar Oil—
Antwerp, 10 cks.
Hamburg, 2 dms.
Tar Salts—
Rotterdam, 2 cks.
Hamburg, 15
Toluol—
Rotterdam, 75 cks.
Whiting—
Bombay, 80 cks.
Zinc Chlorate—
Barcelona, 50 cks.

HULL.

Week ending June 27th.

Alkali—
Amsterdam, 1 ck.
Bremen, 120 bgs.
Ammonium Sulphate—
Hamburg, 94 bgs.
Benzol—
Rotterdam, 24 cks. 25 brls.
Amsterdam, 26
Caustic Soda—
Abo, 8 cks.
Bari, 40 dms.
St. Petersburg, 160
Reval, 50 112
Chemicals (*otherwise undescribed*)
Antwerp, 5 pks.
Amsterdam, 20 cks. 12
Bombay, 394 3 cs.
Copenhagen, 26
Christiania, 23 5 5
1,067 slbs.
Constantinople, 50
Gothenburg, 12 105
Hango, 2
Hamburg, 8 11 2
Kurrachee, 118
Odessa, 15 100
Stettin, 3
Rouen, 20
Rotterdam, 25 40
Wyburg, 40
St. Petersburg, 10
Trieste, 14
Venice, 9 dms
Cottonseed Oil—
Antwerp, 824 c.
Amsterdam, 672
Gothenburg, 50
Hamburg, 1,160
Stavanger, 121
Stettin, 200
Rouen, 100
Rotterdam, 501
Stockholm, 202
Dyestuffs (*otherwise undescribed*)
Stettin, 4 kgs.
St. Petersburg, 14 cs.
Linseed Oil—
Amsterdam, 102 c.
Bergen, 35
Bombay, 118
Copenhagen, 68
Christiania, 914
Christiansand, 18
Constantinople, 35
Christiansund, 51
Drontheim, 35
Hamburg, 524
Kurrachee 80
Stavanger, 44
Rotterdam, 6
Trieste, 126
Manure—
Abo, 1,000 bgs.
Dunkirk, 80 t.
Gothenburg, 30
Libau, 99
Stettin, 197
Stockholm, 6 cks.
Jersey, 635 bgs.
Painters' Colours—
Antwerp, 65 cks. 40 pks.
Amsterdam, 19 2
Bergen, 1
Bombay, 152 cs. 390 dms.
Copenhagen, 48 4
Christiania, 8
Christiansand, 40 pks.
Christiansund, 1 144
Drontheim, 92
Gothenburg, 1
Helsingfors, 11 1
Hamburg, 1 2 dms.
Konigsberg, 5
Kurrachee, 2 2
Odessa, 40
Stettin, 69
Rotterdam, 6 1
Wyburg, 150
Stockholm, 47 2
Jersey, 2
Pitch—
Antwerp, 193 t.
Helsingfors, 25 cks.
Soap—
Stockholm, 1 cs.
Tar—
Amsterdam, 7 cks.
Bremen, 1
Copenhagen, 10
Dunkirk, 25
Hamburg, 20
Wyburg, 25
Toluol—
Amsterdam, 23 cks.
Turpentine—
Bombay, 10 dms.
Varnish—
Helsingfors, 1 cs.
Hamburg, 1
Rotterdam, 2
Stockholm, 1
Amsterdam, 1
Bombay, 75 dms. 3
Antwerp, 3 cks 1

GLASGOW.

Week ending July 2nd.

Albumen—
U.S.A., £160
Ammonium Sulphate—
Cullera, 237 t. 18¼ c.
Hamburg, 25 7
Barcelona, 40 14
Reunion, France, 10 3¾
Valencia, 539 2
Bleaching Powder—
Dunedin, 7 t. 5½ c.
Borax—
Christiania, 12¼ c.
Carbolic Acid—
Germany, 11 t.
Castor Oil—
Freemantle, W.A., £36
Caustic Soda—
Brisbane, 19 t. 17¾ c.
Auckland, 1 5
Dunedin, 10 11
U.S.A., 58 4½
Coal Products—
Aniline Colours
U.S.A., £180
Aniline Salt
Lisbon, £24
Creosote
Bayonne, £1,450
Bordeaux, 850
Creosote Oil
Hamburg, 34 t. 12 c.
France, 177 12
Naphtha
Dunedin, £40
Naphthaline
Bordeaux, £20
Pitch
Canada, £62
Tar
Christiania, 25 brls.
Hamburg, 11 t. 10 c.
Bombay, £30
Iquique, 26
Canada. 47
Tar Acids
U.S.A., £33
Dyestuffs (*otherwise undes.*)—
Brisbane, £22
Gothenburg, 155
Lisbon, 266
Barcelona, 40
Extracts—
Barcelona, £51
Boston, 6 t. 12⅓ c.
U.S.A., 121
Canada. 328
Fustic Extract—
Canada, £87
Gelatine—
Dunedin, £44
Lead Acetate—
Bombay, £35
Calcutta, 36
Lead Nitrate—
Paris, 10 t. 11¾ c.
Canada, 5 6
Linseed Oil—
Auckland, 1 t. 3⅛ c.
Brisbane, 2 1⅛
Dunedin, 4 7
Perth, W.A., 1 11¼
Wellington, 4 2
Yokohama, 1 5
Logwood—
Dunedin, £100
Manganese—
Rotterdam, 11 t.
Basle, 11 14¼ c.
Rouen, £53
Oxygen—
Paris, £162
Paint—
Christiania, 2½ c.
Painters' Colours—
Auckland, £377
Brisbane, 185
Christchurch, 184
Rockhampton, 30
Bombay, 479
Dunedin, 115
Pt. Lyttelton, 196
Shanghai, 74
Singapore, 22
Paraffin Wax—
Valencia, £25
Rouen, 20
Barcelona, 117
Bombay, 120
Marseilles, 33
Stockholm, 108
Phosphoric Acid—
San Jose De Guatemala, £55
Potassium Bichromate—
Lisbon, £222
Bombay, 394
Rouen, 16 t. 1 c.
Barcelona, 458
Bombay, 5 8¾
N. Zealand, 7¾
Rosin Oil—
Amsterdam, £13
Salt—
Brisbane, 608 t. 9 c.
Sheep Dip—
Dunedin, £200
Soap—
Lisbon, 2 t. 6 c.
Bombay, 3 7½
Reunion, France, 4 10
Soda Ash—
Brisbane, 50 t. 3 c.
Sodium Bichromate—
Rouen, 11 t. 10¾ c.
Barcelona, 3 19¾
Bombay, 1 ¾
Starch—
Lisbon, £59
Rio de Janeiro, 26
Sulphuric Acid—
Calcutta, £21
Superphosphates—
Reunion, France, 30 t. 4½ c.
Tallow—
Rotterdam, 14 t. 17 c.
Tartaric Acid—
Rotterdam, £96
Tin Crystals—
Lisbon, £21
Treacle—
Christiania, 20 t. 12 c.
Freemantle, W.A., 1 15
Stockholm, 12 7½
Ultramarine—
U.S.A., £37
White Lead—
Bombay, £23
Wellington, 70

TYNE.

Week ending June 27th.

Alkali—
Amsterdam, 3 t. 7 c.
Rotterdam, 4 5
Hamburg, 5 11
Kalmar, 30 10
Alum—
Rotterdam, 10 t. 6 c.
Antimony—
Rotterdam, 4 t.
Hamburg, 5
Arsenic—
Antwerp, 1 t. 1 c.
Christiania, 1 2
Barium—
Rouen, 10 t. 3 c.
Barium Carbonate—
Rouen, 12 t.
Bleaching Powder—
Amsterdam, 8 t. 6 c.
Copenhagen, 11 5
Middlefart, 10 2
Rotterdam, 23 15
Gothenburg, 45 5
Hamburg, 42 10
Antwerp, 5 11
Christiania, 18 16
Gefle, 30 5
Bones—
Rouen, 10 t. 10 c.
Carbolic Acid—
Middlefart, 12 c.
Caustic Soda—
Copenhagen, 2 t. 18 c.
Rotterdam, 2 6
Nykjobing, 1 9
Genoa, 18 13
Aarhuus, 1 4
St. Petersburg, 100 8
Hamburg, 6 18
Stavanger, 1 4
Antwerp, 12 14
Linseed Oil—
Antwerp, 89 glns.
Litharge—
Amsterdam, 3 t. 2 c.
Antwerp, 3 8
Rouen, 3 2
Magnesia—
Genoa, 7 c.
Hamburg, 3 t. 6
Paint—
Hamburg, 5 t. 8 c.
Antwerp, 1 tin 2 12 brls.
Rouen, 5
Pitch—
Copenhagen, 2 t. 9 c.
Salt—
Antwerp, 4 jars
Soap—
Antwerp, 14 bls. 2 q.
Soda—
Amsterdam, 10 t.
Genoa, 19 6 c.
Gothenburg, 1 19
Aarhuus, 5 7
Antwerp 10 7 1,000 lbs.
Christiania, 45 5
Stockholm, 14 13
Soda Ash—
Bergen, 6 t.
Christiania, 13 7 c.
Sulphur—
Gothenburg, 20 t.
Antwerp, 5
Superphosphates—
Pernau, 318 t. 15 c.
Tallow—
Genoa, 6 t.
Hamburg, 1 13 c.
Treacle—
Antwerp, 10 glns.
Varnish—
Antwerp, 3 glns.
Vermilion—
Antwerp, 6 lbs.
White Lead—
Gefle, 10 c.
Whiting—
Antwerp, 2 c.

PRICES CURRENT.

WEDNESDAY, July 8th, 1896.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. ..per cwt.	5	9 &	8 9
,, Glacial .. .. ,,		10/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	3
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, 880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/		
,, Nitrate .. .. per ton	37	10	0
,, Phosphate .. .. per lb.	0	0	5¼
,, Sulphate (grey) London .. .. .. per ton	8	2	6
,, ,, (grey) Hull .. .. ,,	8	0	0
Aniline Oil (pure) .. .. per lb.	0	0	8½
Aniline Salt ,, ... ,,	0	0	8
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	1	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	6
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	2	11
,, 50/90 ,, ... ,,	0	2	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	2	3
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	10
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	4
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	49	8	9
,, Sulphate .. .. ,,	17	0	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	7	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	3	9
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	10	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	19	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	2	6
,, ,, (grey) (ex ship .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	15	0
,, Ore, 70 % .. .. per ton	3	15	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	3	0
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	0
Oils:—			
Cotton-seed .. .. per ton	16	10	0
Linseed .. .. ,,	19	10	0
Petroleum, American .. .. per gallon	0	0	6½
Stearine .. .. per ton	21	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. ..nett per lb.	0	0	4⅝
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	5	0
,, Chlorate .. .. per lb.	0	0	4½
,, Cyanide, 98% .. .. ,,	0	1	1½
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	15	0
,, Prussiate Yellow .. .. per lb.	0	0	7
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	7½
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % . ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	15	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5¼
,, Borate (Borax) .. .. net, per ton.	20	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	7	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	10	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	10½
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	15	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	2	6
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6¼
,, Barium, 95 % .. .. ,,	0	0	4¼
,, Potassium .. .. ,,	0	0	7
Sulphur (Flowers) .. .. per ton.	6	5	0
,, (Roll Brimstone) .. .. ,,	5	10	0
,, Brimstone: Best Quality .. .. .. ,,	3	17	6
Superphosphate of Lime (26% .. .. ,,	2	17	6
Tallow .. .. ,,	19	0	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	65	0	0
Zinc (Spelter) .. .. ,,	18	2	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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FOOD ADULTERATION.

THERE are some recommendations in the recently issued report of the Select Committee on food adulteration, which will raise the bile of those who are and have for so long made a nice thing out of the public through their dupes, the retailers. Whether it does so or not, there is no doubt that the recommendations are justifiable and called for, and considering all things, we think the Committee have shown every consideration for the wholesale dealers. Of course, the latter will do their best to make as much fuss as possible about the way their trade will be cut up. But the Committee have had sufficient evidence before them to know best about the reliability of such clap-trap. Silence is the best policy for all wholesale dealers who cannot show a clean sheet, for otherwise the noise they make in clamouring against the recommendations of the Committee will only be interpreted as a measure of the lucrativeness of the traffic in butter substitutes when sold as butter.

The Committee appear most determined in their endeavours to get at the wholesale dealers, and their suggestion concerning the division of samples shows that they have carefully considered all the loopholes the wholesale dealers may escape by. There can be no two opinions as to the aim and object of the recommendation that section 14 of the Act of 1875 should be so amended as to require that the article, after purchase, should be divided into four parts, one of which should be retained by the retailer and three by the officers taking samples. On the officers being informed by the retailer that in defence he proposes to plead the warranty furnished to him with the article which forms the subject of the proceedings, the officer should forward one of the samples retained by him to the wholesale dealer.

From time to time we have recorded, and commented on, cases in these columns in which the legal subtleties underlying the word "food" have been shown to defeat common sense. It is very pleasing to know that this matter has been fully dealt with, and that the Committee unhesitatingly advise that the definition of the word "food" as used in the Acts should be altered so as to include expressly all articles intended to enter into or to be used in the preparation or flavouring of food.

The suggested constitution of a scientific court of reference should do much to lessen the friction between analysts and Somerset House Laboratory. The battles that have been fought in time past were exciting, and some of the passages amusing; but they certainly were not conducive to the extension of the work which the Food and Drugs Acts was supposed to be encouraging. We dealt recently with the question of the adequacy of fines and the publication of offences, and, practically speaking, the Committee have embodied in their report the changes which were then under consideration. In addition to these general recommendations, the Committee

propose certain definite changes be made so that any person guilty of a second offence under the Sale of Food and Drugs Acts shall be liable to a minimum penalty of £5.; and that in respect of a third or subsequent offence under those Acts and the Margarine Act, 1887, the punishment of imprisonment without the option of a fine may be inflicted at the discretion of the magistrates of the Court.

Standards either in connection with butter or milk have been eschewed by the Committee, and perhaps wisely. Since they suggest a Court of Reference, the fixing of standards of quality is best left in the hands of such court. Nevertheless there is no doubt that from the general tone of their remarks the Committee incline to the fixing of working standards, even if it be left in the power of the Court to depart from them in exceptional cases. The restrictions of the law have been augmented and provision made for increasing the stringency with which the law can be applied to the sale of milk, and particularly condensed milk.

The taking of samples of goods in transit is strongly advocated, while the determination of the Committee to bring the responsible parties to book is again further indicated by the proposals to endow the retailer with power to refuse to sell an article otherwise than in a manufacturer's labelled tin or box, and to increase the penalty for refusing to sell a sample to an authorised officer under the Acts.

SOCIETY OF CHEMICAL INDUSTRY.

THE annual general meeting of this society opened on Wednesday, in the hall of the Carpenters' Company, London-wall, and was attended by a large number of gentlemen interested in the chemical industry in London and the provinces. Mr. T. Tyrer (president) occupied the chair. The proceedings opened with a few words of welcome addressed to the gathering by the Master of the Carpenters' Company (Mr. E. Smith) Mr. C. G. Cresswell (general secretary) then presented the report of the Council, which stated that the number of members on the register was 2,957, as compared with 2,895 at the last annual meeting.

On the motion of Mr. Brunner, M.P., seconded by Mr. Carulla, the report was adopted.

Mr. Tyrer, in his presidential address, discussed various ways in which the society's usefulness might be made still more available for the benefit of applied chemistry. Watchfulness over patent law, trade and merchandise marks, pollution of rivers, noxious vapours, secondary education, endowment of research, etc., was a duty which the Council must, notwithstanding the existence of such organisations as chambers of commerce, continue to perform, chiefly by strengthening the action of these other bodies where possible. Comparing German and English chemical industry, he said that the real cause of the progress and prosperity of German chemical industry was to be found in the superior qualifications of the directing minds. Germany did not owe her progress alone to protective tariffs, nor to the superior discipline of her workmen, nor largely to the difference in wages in the large industries, but to her thorough system of education, elementary and secondary. The Germans had more knowledge, and they took more pains than we, while all our difficulties were of our own making, and would find no panacea in protection. The English drug trade could not endure the high dock charges of the Port of London. We had lost our "push," and why? Simply because German chemists were ever devising new preparations. We would not take pains and our rivals did. Although our commercial education was now better than formerly - thanks to the London and other Chambers of Commerce—it was still very far from being an effective instrument for pushing business. How few knew two languages or were well up in commercial geography! While opposed to the unchecked expenditure in connection with our Elementary Schools, he thought that greater facilities for more advanced education should be given to those who showed a fitness and a desire for it. In conclusion, he pointed out that we must learn to protect our industries, not by tariffs, but by a sound system of education—education even in economics for the leaders of the workmen. The two great obstacles to the development of British industries were the demands for prohibitive scales of wages, especially in the fuel supply, and the examinational part of our educational system, which was bad, but there was considerable difficulty in eliminating it altogether.

At the close of his address the President presented the Society's medal to Mr. John Glover, inventor of the tower which bears his name, and from which, it was stated, the chemical industry had derived enormous benefit. Dr. E. Schunck, F.R.S, was elected to the office of President for the ensuing year. At the invitation of London Section, the members subsequently lunched at Cannon-s Hotel, and the afternoon was spent in visiting the Tower Bridge machinery (by permission of the City Corporation) and other plac interest. In the evening the members were received at the Ma House by the Lord Mayor and the Lady Mayoress.

DUCTILE CAST IRON.

THE East Chicago Foundry Company, whose works are at Chicago, Ind., U.S.A., are placing a new product on the ma which they term "ductile cast iron." Their experiments, which extended over the past year and a half, have been so satisfactory they have decided to abandon their former business of making ge iron castings, and have fitted up their foundry to make ductile castings exclusively. They are prepared to make castings of character ranging from 10 lbs. to 10,000 lbs. in weight, which are only solid, homogeneous, and free from blow-holes, but which also be drawn under the hammer or perfectly welded, and will work under the planer or other tools.

The samples shown by the company are of an extraordi character, suggesting many of the qualities of steel, but at the time presenting features peculiar to iron. The metal is remarkabl its strength, coupled with its ductility. A test bar, cast with the b ing section curved in on both sides, instead of being cut out afterw as usual, was tested by Fraser and Chalmers, and showed a te strength of 63,000 lbs. to the square inch. Other tests have sh over 80,000 lbs. After being heated to a dull red and plunged cold water, it can be cut easily with a file, showing that it take temper. Specimens of castings are shown which have had por heated and drawn out flat under the hammer, afterward being tw cold and pounded flat, without a sign of fracture. Gates from cas are shown which have stood remarkable torture of this character. notable piece of work is a heavy chain, of which the links were open, then joined and the open spaces welded without the use of Valve stems, crank shafts, and other similar pieces are shown w have been finished to pattern in a lathe, exhibiting a smooth su without a suspicion of a blow-hole. Intricate castings are exhi which have been reproduced regularly without a failure, while a high percentage of losses has been reported when made by methods of producing very strong castings.

It is the intention of the company to meet the demand for castir the highest grade, competing with drop forgings and aiming to pr shapes which are difficult to work under a hammer, but for which ings have heretofore not been found sufficiently strong and trustwo It has been shown by extensive experiments that the castings by this company are well adapted for electrical apparatus, owi their high conductivity. Another important field has thus been op which is full of possibilities.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign colonial statistics of the United Kingdom, give the amoun value of alkali and bleaching materials shipped to the undermenti countries for month ending May, 1896, as compared with 189

ALKALI.

Port.	1895.	1895.	1895.	18
	Cwts.	Cwts.	£	£
Russia	30,765	21,807	9,669	6,
Sweden and Norway	13,236	7,394	2,698	1,
Germany	14,178	7,579	3,764	2,
Holland	9,979	8,422	1,884	1,
France	4,746	5,718	1,622	2,
Spain and Canaries	32,245	22,314	12,130	7,
Italy	23,122	19,938	7,049	4,
United States	363,778	168,901	78,825	41,
Australasia	9,760	20,922	3,051	6,
British North America	21,580	15,219	5,794	4,
Other countries	94,191	76,350	26,202	23,
Total	617,580	374,564	152,688	101,

BLEACHING POWDER, ETC.

Port.	1895.	1896.	1895.	18
	Cwts.	Cwts.	£	£
United States	76,817	50,922	27,960	17,
Other countries	64,084	40,801	23,048	13,
Total	140,901	91,723	51,008	31,

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Extracting Precious Metals. H. L. Sumlan and H. F. Kirkpatrick-Picard. 14,387. June 29.

Extracting Precious Metals. H. L. Sulman and H. F. Kirkpatrick-Picard. 14,388. June 29.

Caustic Lime from Lime Mud. J. Morrison, W. H. Richmond, and J. Brock. 14,389. June 29.

Manufacture of White Lead. H. C. Webster (of the firm of A. Ferguson & Co.) and R. Crawford. 14,428. June 30.

Metallic Alloys. A. F. Cothias. 14,479. June 30.

Plates for Stearine Works. A. F. Cothias. 14,482. June 30.

Classifying, Amalgamating, and Cyanizing Gold and Silver Ores. J. Garnier. 14,493 June 30.

Muriate of Ammonia Manufacture. M. Levy. 14,507. June 30.

Apparatus for Removing Suspended Matter from Sewage, etc. R. W. Cass. 14,565. July 1.

Refuse Destructors. J. J., T. F., and J. W. Meldrum. 14,614. July 2.

Degreasing Skins, etc. W. S., A. P., and W. S. Sagar (junr.). 14,617. July 2.

Treating Smoke and Fumes from Furnaces. J. Corp. 14,683. July 2.

Improvements in Soaps. T. McKinnon. 14,806 July 4.

Extracting Zinc from Zinc Sulphide Ores. 14,862. July 4.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Degreasing and Cleansing Wool, Cotton Waste, and like materials, and in Apparatus therefor. F. N. Turney, Whitemoor Leather Works, Nottingham. Eng. Pat. 14 978. Aug 8, 1893.

This patent deals very fully with an apparatus for cleansing wool. There are fourteen claims in the patent supplemented by nine drawings. The essential features are the continuous supply of the wool in a roll prepared by passing through a specially-constructed winder. The wool is also beaten in the solvent, it being found that the risks of felting are small if a suitable solvent is employed. There is an air locking contrivance which permits the entrance of fresh supplies of wool, but prevents the vapour of the solvent escaping, thereby ensuring economy in using and minimising danger.

Method and Apparatus for Treating Wood for Fireproofing or Preserving the same. A. M. Clark, 53, Chancery-lane, W.C. (communicated by the Electric Fireproofing Co., Hudson and Spring Streets, New York, U.S.A.). Eng. Pat. 7,032. March 31, 1896.

A cylinder is fitted with steam coils and sprayers, the wood to be treated being run in on a bogey which travels on rails passing into the cylinder. The wood is then treated thus :—The cylinder is closed and exhausted, and steam admitted into the coils. In this way the moisture in the wood is expelled, reducing the vacuum and creating a pressure. The products of this treatment are blown off, and the vacuum again obtained, when a treating fluid and steam are injected through the sprayers or atomizers. This treatment is repeated until the vacuum has given place to a pressure of 5lbs. to 40lbs. The whole is then allowed to cool, thus creating a partial vacuum, when steam is blown in and the condensation drawn off. A vacuum again forms, and the wood is left under the influence of the same until the air has been removed from the wood. A solution of phosphate and sulphate of ammonia is then run into the cylinder to completely fill the same, and the pressure raised by pumps to 50lbs. or 200lbs, according to requirements. When fully saturated the wood is finally dried.

Improvements in the Method of and Means for Separating Knots and Other Matters from Wood Fibre in the Manufacture of Wood Pulp. The Kellner-Partington Paper Pulp Company, Limited, 11, Newmarket-lane, Manchester. (Communicated by N. Pedersen, Borregaard, Sarpsborg, Norway.) Eng. Pat. 15,783. August 22, 1895.

Apparently there is no great advance upon existing methods set forth in this patent. The disintegrated wood is delivered into a tank of water on the surface of which are a number of rotating paddles which repeatedly immerse the ground wood in the water, this seemingly being the chief feature of the invention. In this way it is claimed that a more perfect separation of the knots etc. is ensured. The pure woody fibres float on the top and are removed at the other end of the tank by a conveyor. The knots, etc., sink to the bottom of the tank, which by preference is V shaped, and are carried by a screw conveyor to a compartment at one end of the tank from which a hopper elevator discharges the separated waste.

Improvements in the Electrolytic Deposition of Metals and in means applicable therefor. C. Raleigh, Johannesburg, S.A.R. Eng. Pat. 11,944. June 19, 1895

Various methods are described for obtaining metals, notably gold, in the form of a deposit that can be separated from the electrode. One way of achieving this is to use a film of lead or other foil. By another method the body of the electrode is made of a metal or an alloy having a distinctly lower melting point than the metal being deposited. The former can finally be melted away, leaving the deposit of metal intact. A special feature is likewise made of mercurialised electrodes which are peculiarly suited for certain methods of electro-deposition.

Process for Purifying Chlorine Gas. P. Jensen, 77, Chancery-lane, London (communicated by Diderik Cappelen and H. Cappelen, of Gjemso Kloster, Skien, Norway). Eng. Pat. 9,544. May 5, 1896.

The presence of carbon dioxide in the chlorine gas obtained by the electrolysis of alkaline chlorides is the cause of considerable trouble in preparing bleaching powder. The inventor removes the carbon dioxide by passing the gases through milk of lime. The loss of chlorine is said to be very small, the lime residue at the bottom of the absorbers seldom containing more than 0·5% chlorine. The purified chlorine, on the other hand, contains only about 0·38% carbon dioxide, as against several per cents in the unpurified gas. It is in consequence possible to obtain the chlorine in a state suitable for the making of bleaching powder, while a good bye-product in the shape of bleach liquor is obtained.

Improvements in the Manufacture of Chlorine from Hydrochloric Acid Gas. T. T. Best, A. Kay, and J. Brock, all of G11, Exchange-buildings, Liverpool. Eng. Pat. 13,461. July 12, 1895.

In the Deacon and similar processes for the manufacture of chlorine, only a certain portion of the HCl is decomposed into chlorine, a comparatively large quantity of HCl escaping undecomposed. Drying the gas and passing it over considerable lengths of contact material has obviated this in some degree, but a considerable amount of HCl is still undecomposed notwithstanding. This invention aims at increasing the percentage of decomposition by removing the water formed during the reaction represented by the equation, $2HCl + O = H_2O + Cl_2$. The gases from each Deacon decomposer are passed over coke wetted with strong vitriol, and the dried gases again passed through a decomposer. This *modus operandi* can be extended to a series of drying towers and decomposers until the HCl is practically fully decomposed.

IMPORTS AND EXPORTS FOR JUNE.

THE Board of Trade returns for the past month were as a whole satisfactory and encouraging. It is to be regretted, however, that there is no material improvement in chemical products in particular.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

ARTICLES.	Quantities, 1895.	1896.
Margarine ..... Cwt.	58,765	64,030
Copper Ore and Regulus..... Tons.	22,537	9,632
Pyrites..... ,,	50,929	47,729
Tin ..... Cwt.	57,253	45,170
Alkali ..... ,,	32,631	18,715
Brimstone ..... ,,	37,871	12,858
Dyes, Coal Tar ..... £.	49,921	60,340
Saltpetre ..... Cwt.	16,979	25,576
Petroleum ..... Gall.	9,938,550	13,191,061
Turpentine ..... Cwt.	26,250	53,354
Guano..... Tons.	5,812	6,669
Nitrate of Soda ..... ,,	5,660	6,295
Paraffin ..... ,,	26,829	56,222
Rosin ..... Cwt.	173,357	146,155
Tallow and Stearine..... ,,	265,441	219,117
Oil Seed Cake ..... Tons.	29.952	23,845
Wood Pulp..... ,,	23,091	27,180

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

ARTICLES.	Quantities. 1895.	1896.
Alkali ..... Cwt.	430,155	368,448
Cement ..... Tons.	41,703	36,324
Coal and Coke ..... ,,	2,976,871	3,264,315
Copper, all kinds ..... Cwt.	77,510	73,561
Iron and Steel ..... Tons.	265,111	350,575
Chemical Manures ..... ,,	23,590	20,117
Oils, seed ..... ,,	4,229	4,583
Salt ..... ,,	81,771	63,709

Parliamentary Jottings.

THE DANGERS OF WOOLSORTING.

IN the House of Commons last week, in reply to Mr Flannery, Sir M. W. Ridley said: Three deaths from anthrax were recorded in the West Riding during 1895, and three more in the same district have come to my knowledge already during the present year. The conditions of work in those industries in which anthrax principally occurs have been under the consideration of one of the Committees on Dangerous Trades now sitting, and on a recommendation which they have made to me in view of the recent fatal cases I propose to certify the process of woolsorting as dangerous under section 8 of the Act of 1891, and to take immediate steps to establish official rules, which will follow with some modifications the voluntary rules to which the hon. member refers, and which are already carried out by the majority of employers.

THE METRIC SYSTEM.

Yesterday (Friday) Sir Stafford Northcote asked the President of the Board of Trade in the House of Commons whether he would introduce a Bill this session dealing with the metric system, in order that chambers of commerce and other parties interested may have sufficient time during the recess to consider the proposals of the Government on the subject. It will be remembered that the subject has already been considered by a Select Committee of the House of Commons, which recommended that the metric system of weights and measures should at once be legalised for all purposes, and after a lapse of two years be rendered compulsory by Act of Parliament. On the same question a deputation from various chambers of commerce waited upon Mr. Balfour at the Treasury some time ago, but the right hon. gentleman expressed his belief on that occasion that the time was not opportune for the wholesale introduction of the system. It is understood that since then a Bill has been framed, but there is no probability of it being introduced during the present session.

THE VALUE OF LEATHER REFUSE.

IN a paper dealing with this subject communicated by Mr. J. B. Lindsey to the "Journal of the American Chemical Society," the author contrasts the statements of other investigators with his own experiments. He says:—In another publication the writer reviewed the experiments made by various investigators concerning the agricultural value of different forms of leather refuse, and drew the following conclusions: "The results of both field and pot experiments, as well as artificial digestion experiments, indicate that leather, either raw, roasted, or steamed, is a very inferior source of plant food. Carefully-conducted experiments by Wagner give the nitrogen it contains a relative value of 20, the nitrogen in sodium nitrate being valued at 100. When nitrogen in organic matter is valued at from 16 to 18 cents. per pound, nitrogen in raw, roasted, or steamed leather should be worth but from three to six cents. per pound.

Deherain and others have suggested that if leather be dissolved in sulphuric acid its nitrogen will be made as available as that contained in the average animal matter. It is generally understood that many European manufacturers of fertilizers thus turn leather waste to account. No direct experiments are on record, so far as the writer is aware, to bear out the above claim.

In order to study the value of dissolved leather, pot experiments with oats were conducted during the years 1894 and 1895. The results obtained in 1894 have already been published. The results for both years are presented below.

General Plan of the Experiment.—The experiments were conducted in galvanized iron pots. The soil, poor in all three ingredients of fertility, was supplied with an excess of potash and phosphoric acid. The nitrogen in sodium nitrate was taken as a standard, being rated at 100. The same quantity of nitrogen in sodium nitrate, Philadelphia tankage (roasted leather) and dissolved leather was applied to different sets of two or three pots each; one set of pots received no nitrogen. These latter pots measured the nitrogen capacity of the soil. The entire number of pots were treated as nearly alike as possible so far as sunlight, moisture, etc, were concerned. With similar conditions and plant food alike, excepting the nitrogen source, it is clear that the amount of nitrogen taken up by the plants in the different pots would be a measure of the availability of the nitrogen in the several forms of nitrogen-containing material.

The Pots Used.—The pots, of thin galvanized iron, were seven and three-fourths inches in diameter and eight inches deep. A galvanized iron tube, half an inch in diameter, extended from the top to the bottom of the pot, connecting at the base with a second tube of the same material one inch in diameter. The latter tube extended along the bottom of the pot, and was perforated with small holes. The obje these tubes was to supply water partly from the bottom of the pot.

EXPERIMENTS A.

These experiments were begun in 1894 with eighteen pots, parallel pots for each distinct test; they were continued in 1895 twelve pots, two pots being employed for each test.

The Soil.—The soil was of a gravelly nature, and had not cultivated for a long time. It was very poor in all three ingredient the following analysis will show:—

	Per cent.
Water when tested	14·25
Phosphoric acid	0·13
Potassium oxide	0·08
Nitrogen	0·09

Fertilizers Used.—The sources of nitrogen were sodium nit Philadelphia tankage,* and dissolved leather. The dissolved le was prepared in 1894 by heating 210 grams of C. P. sulphuric ac 50° B. at 80° C. and slowly adding sixty-three grams of finely gr sole leather. The mixture was thoroughly stirred and allowed to one half-hour. A dark pasty mass resulted, to which were a forty-nine grams of water to thin somewhat, together with suffi calcium carbonate to neutralize the excess of sulphuric acid, and to the resulting mass suitable to handle. The calcium carbonate used in preference to the phosphate, in our case, to avoid an exce phosphoric acid. After standing twenty-four hours the mixture be dry and friable. The dissolved leather for 1895, was prepared i same way, excepting that the water was omitted. Double s phosphate was used as a source of phosphoric acid, and potash applied in the form of the double sulphate of magnesia and potash.

COMPOSITION OF FERTILIZERS USED.

	Nitrogen Per cent.	Available phosphoric acid. Per cent	Total phosphoric acid. Per cent.	P s co Pe
Sodium nitrate for 1894 and 1895 ..	14·28	....	....	
Dissolved leather, I., 1894	0·97	....	....	
,, ,, I, 1895	0·97	....	....	
Philadelphia tankage 1894 and 1895	7·80	....	....	
Double superphosphate 1894 and 1895	....	47·42	47·80	
Double sulphate of magnesia and potash, 1894	....	....	....	
Double sulphate of magnesia and potash, 1895	....	....	....	

ARRANGEMENT OF THE EXPERIMENT.

1894.

Source of nitrogen.	Amount of nitrogen applied per pot. Gram.	Amount of available phosphoric acid applied per pot. Grams.	Amoun potassium applied p Gram
Pots 1, 2, 3, soil nitrogen....	0 00	1 20	2 40
,, 7, 8, 9, sodium nitrate..	0·30	1 20	2·40
,, 13, 14, 15, dissolved leather	0·30	1·20	2·40
,, 10, 11, 12, sodium nitrate..	0·60	1 20	2·40
,, 16, 17, 18, dissolved leather	0·60	1 20	2·40
,, 4, 5, 6, Phil. tankage ..	0·60	1·20	2·40

Pots 1, 4, 7, 10, 13, 16, were infected with a small quantity of vated soil to note if the infection facilitated to any marked degr nitrifaction of the organic nitrogen in the case of these particular e ments. To each of these pots was also added ten grams of air- lime.

1895.

Source of nitrogen.	Amount of nitrogen applied per pot. Grams.	Amount of available phosphoric acid per pot. Grams.	Amoun potassium per p Gram
Pots 1, 2, soil nitrogen....	0 00	2·40	4 80
,, 7, 8, sodium nitrate ..	0·30	2·40	4 80
,, 13, 14, dissolved leather .	0·30	2·40	4·80
,, 10, 11, sodium nitrate ..	0 60	2·40	4·80
,, 16, 17, dissolved leather..	0·60	2·40	4·80
,, 4, 5, Phil. tankage....	0·60	2·40	4·80

It will be noticed that double the quantity of phosphoric aci potash was applied in 1895, to make sure of a sufficient amount to the nitrogen to do its best work. To each of the pots was adde grams of air-slaked lime. The same soil was used in 1895 as in 1

Filling the Pots.—About an inch of good clean gravel w placed in the pots. All of the fertilizer excepting the nitrate wa mixed with eleven and one-half pounds of soil, which was put layers and gently pressed down. One-half gram of selected oat then scattered over the soil, and covered with one pound of earth

* Roasted leather.

ere thus filled to within one centimeter of the rim. One-half of rate was applied in solution at the time of seeding, and the other ve to six weeks later.

eral Care of the Pots.—The pots were set into a wagon running iron track. The floor of the wagon was surrounded with sides hes deep. The pots were carefully watched and kept sufficiently d. A portion of this water was supplied from beneath, and the ider was added to the surface by the aid of a sprinkling pot. imes it was necessary to water twice daily. The pots were kept open whenever the weather permitted. During wet or windy r, and at night, they were run under cover.

vesting, etc.—The plants in pots 1, 2, 3, 4, 5, 6, in 1894, and in , 5, in 1895, were very light green and spindling during the growing period. The plants in the different pots were harvested matured. They were cut close to the soil, put in paper bags, ng away to dry. After the product of each pot was thoroughly , the grain was carefully removed, weighed, coarsely ground, y matter determinations made. The straw was cut into short s, and also tested for dry matter. Finally, both grain and straw round fine, and nitrogen determinations made.

figures in Tables I. and II. show the results obtained in two The first column in Table I. shows the amount of nitrogen ap- o each pot. The next four columns show the average dry matter ed for both years. The four columns next following indicate in in dry matter over soil nitrogen pots. The last column shows rage gain in dry matter of straw and grain for two years, pro- by the different fertilisers, the gain produced by sodium nitrate reckoned at 100.

ill be seen that the Philadelphia tankage has been but slightly le as a nitrogen source. Its effect the second year was rather than during the first season. The combined results for the two how it to be very inferior to the sodium nitrate, yielding practi- ne-tenth as much dry matter. These results simply confirm the gations made by others with different forms of untreated leather.

results with dissolved leather are very different. One could observe that during the entire growing season the plants treated his substance were uniformly green, healthy, and grew con- sly, being but little if any inferior in colour to the sodium nitrate The amount of dry matter obtained for two years with the aid of urce of nitrogen when compared with sodium nitrate, has been o 100.

three-tenths gram of nitrogen from sodium nitrate the second roduced a poor yield of grain. This can only be accounted for he fact that the second half of the nitrate was not applied until before the grain began to head, and that this was not early for the plant to work it over into organic combination.

In cases where six-tenths of a gram of nitrogen was applied in the form of sodium nitrate but little grain was produced. This might be the result of two causes. First, because an excess of soluble nitrogen interfered with its natural transformation into organic combination, and in the next place it is possible, as already stated, that the second application was made too late. It is believed that the amount of phosphoric acid and potash applied especially the second year was in all cases sufficient. The six-tenths gram. of nitrogen from the dissolved leather did rather better work than from sodium nitrate, but it was still much inferior to that performed by three-tenths gram.

The amount of nitrogen obtained by the plant is a better measure of the availability of the nitrogen than the dry matter produced. This will be found in Table II. The first portion of the table shows the nitrogen in the total dry matter produced, and the average per cent. of nitrogen in 100 grams of dry matter. Next to be noted is the amount of nitrogen returned in the straw and grain, for every 100 parts of nitrogen applied. The results obtained from the several sources of nitrogen are then compared with the nitrogen obtained by the straw and grain of the sodium nitrate pots reckoned at 100. This comparison shows that the plants were able to take only about one-tenth as much nitrogen from Philadelphia tankage as from sodium nitrate, while they secured seven-tenths as much nitrogen from the dissolved leather as from the nitrate. When six-tenths gram of nitrogen was applied in the form of sodium nitrate and in dissolved leather, both the straw and grain contain a higher percentage of nitrogen than when but three-tenths gram was applied; the yield of straw, and especially of grain, was proportionately less, however, when the larger quantity was added. It is evident that a portion at least of the nitrogen taken up had not been turned to account in the production of organic substance.

(To be continued.)

AUTOCARS.—During the consideration of the Locomotives on Highways Bill by the Standing Committee on Law last week, Mr. Chaplin moved an amendment substituting three tons for four as the *maximum* weight of mechanically-propelled vehicles to which the provisions of the measure shall apply. The right hon. gentleman further proposed a new subsection providing that in calculating for the purposes of the Act the weight of a vehicle unladen, the weight of any water, fuel, or accumulators used for the purpose of propulsion shall not be included; also a new clause directing that during the period between one hour after sunset and one hour before sunrise the person in charge of a light locomotive shall carry attached thereto a lamp so constructed and placed as to exhibit a light in the direction in which the locomotive is proceeding, and so lighted and kept lighted as to afford adequate means of signalling the approach or position of the locomotive; the penalty for contravention of the section being a fine not exceeding £2.

TABLE I.

	Nitrogen applied to each pot yearly.	Average dry matter produced.				Gain in dry matter over soil nitrogen pots on basis of 0·3 gram of nitrogen applied.				If gain in dry matter with sodium nitrate = 100, then other sources of nitrogen would be equal to:				Average gain in straw and grain, 1894 and 1895.
	Grams.	Straw. 1894 Grams.	Straw. 1895 Grams.	Grain. 1894 Grams.	Grain. 1895 Grams.	Straw. 1894 Grams.	Straw. 1895 Grams.	Grain. 1894 Grams.	Grain. 1895 Grams.	Straw. 1894.	Straw. 1895.	Grain. 1894.	Grain. 1895.	
nitrogen	0·000	7·82	8·64	1·69	1·32	—	—	—	—	—	—	—	—	—
adelphia tankage....	0·600	8·88	11·10	1·66	2·66	0·53	1·23	+	0·67	5·40	13·75	+	31·45	7·5
um nitrate	0·300	17·59	17·59	6·37	3·45	9·77	8·95	4·68	2·13	100·00	100·00	100·00	100·00	100·00
olved leather	0·300	14·35	14·79	4·25	6·00	6·53	6·15	2·56	4·69	66·8	68·7	54·7	220·3	78·1
um nitrate	0·600	19·54	17·28	1·85	2·50	5·86	4·32	0·08	1·19	—	—	—	—	—
olved leather	0·600	19·76	19·76	4·92	5·15	5·97	5·56	1·61	1·91	—	—	—	—	—

TABLE II.

	Quantity nitrogen to each pot.	Nitrogen in total dry matter produced. Grams.			Average nitrogen in 100 grams dry matter. 1894 and 1895.		For every 100 parts of nitrogen applied there has been returned in straw and grain:		When sodium nitrate = 100 other sources of nitrogen equal to:	Every gram of nitrogen applied has produced in dry matter. Average 1894 and 1895.			For every 100 parts of straw there has been produced in grain:
	Grams.	1894.	1895.	1894 and 1895.	Straw. Grams.	Grain. Grams.	1894.	1895.	1894 and 1895.	Straw. Grams.	Grain. Grams.	Straw and Grain. Grams.	Grams.
nitrogen	0·000	0·094	0·105	0·100	0·76	2·50	—	—	—	—	—	—	18·2
adelphia tankage....	0·600	0·126	0·163	0·144	0·94	2·39	5·3	9·67	11·00	2·49	1·12	3·61	38·1
ium nitrate	0·300	0·305	0·305	0·305	0·97	2·84	70·0	66·70	100·00	31·20	11·34	42·54	36·3
olved leather	0·300	0·210	0·273	0·241	0·71	2·70	39·0	56·00	70·00	21·13	12·07	33·20	57·2
ium nitrate	0·600	0·425	0·436	0·430	1·98	3·04	55·0	55·17	80·00	—	—	—	12·5
olved leather	0·600	0·325	0·374	0·349	1·00	2·99	39·0	44·83	62·00	—	—	—	31·7

Our Book Shelf.

PAINTERS' COLOURS, OILS, AND VARNISHES. By G. H. Hurst. Second Edition. 499 pp., with index. 73 Illustrations. London: Charles Griffin and Co., Ltd. 1896. 12s. 6d.

It is not at all surprising that a second edition of this work should have been called for, since we pointed out when reviewing the first edition that it is practically the only comprehensive English work dealing with the subject of oils, paints, and varnishes. The second edition has not only been revised, and the text in many places amended, but it has also been enlarged by some 40 pages of entirely new matter. The new matter is practically scattered up and down the work, and is, therefore, chiefly apparent only to those who are fairly familiar with the work. The most noticeable departure, however, is in the chapter on colour and paint machinery. In addition to various extensions of the text, a number of new blocks have been introduced, illustrative of improved forms of drying plant and grinding machinery. The chapter on paint-oils also merits special mention. In the face of this it will be apparent that the second edition of this work places it once more in the very front rank of technical literature.

NITRO-EXPLOSIVES. By G. P. Sanford. 270 pp., with index. 43 Illustrations. London: Crosby, Lockwood and Son. 1896.

Considering the attention which has been given during the last few years to the use of explosives and blasting agents in mines, it is, if anything, surprising that so little information should be extant concerning the manufacture of nitro-explosives. The author in the present work aims at presenting a practical treatise on the manufacture and analysis of nitro-explosives, and certainly he has compiled a very complete account from both points of view. The first four chapters deal generally with the manufacture and properties of nitro-glycerine, dynamite, and nitro-cellulose. The fifth chapter deals more particularly with the application of these materials to the preparation of what are now well-known blasting agents, such as roburite, bellite, etc. After a brief chapter on smokeless powders in general, we come to the analysis of explosives. Here we find methods for the analysis of dynamite, cordite, and also a general scheme for the analysis of nitro-explosives. The last two chapters deal with physical tests with regard to safety and efficiency, the tests for the firing point of explosives being detailed, as well as the various apparatus used for determining their relative strengths. The book is very neatly got up, the illustrations throughout being good and for the most part original. The book is so far certainly one of the best and most practical contributions to the technology of nitro-explosives.

CHARCOAL: An Inquiry into the Alleged Liability of Wood Charcoal to Spontaneous Combustion. By the Cartvale Chemical Co., Ltd. 44 pp. Paisley: A. Gardener. 1896.

This brochure consists of a number of letters which are the outcome of correspondence entered into by the Cartvale Chemical Co., Ltd., with a view of establishing the truth of the statement that charcoal is liable to spontaneous combustion. The investigation evidently had its origin in a statement respecting the suitability of charcoal as an insulator on board vessels employed in the frozen meat trade. The subject is naturally one of importance as well as interest, and the perusal of the correspondence set forth will well repay the reading by all those interested in any connection with this subject. The outcome of the inquiry may be briefly summarised by the statement that freshly-made charcoal which has not absorbed its moisture and oxygen is liable to so-called spontaneous combustion. When, however, this absorption is complete, as it is in a few days, it is never liable to re-ignition.

SALT EXPORTS.—Between the 22nd of June and the 3rd July no ewer than 53 steamers and sailing vessels were loaded at Runcorn and Weston Point by the Salt Union and its various distributors, with an aggregate of over 15,000 tons of salt. Of this quantity nearly 13,000 tons were destined for the fishing round our coasts.

NITRIC ACID IN THE ATMOSPHERE.—It has long been known that nitrous acid and nitric acid are contained in the products of combustion from fuels containing nitrogen as most fuels do. These acids represent a more advanced state of oxidation than ammonia; they are derived to a certain extent, it may be, from the oxidation of atmospheric nitrogen; and they may also be detected in the products of respiration. Ammonium nitrate may be found in dew, and it seems to be present in larger quantities in spring than in summer and more at night than during the day. These acids are, therefore, normal constituents of the atmosphere under natural conditions, and the minute quantities usually present cannot be considered harmful.

NEW FERTILIZER ACT OF NEW YORK.

SECTION 1. Every person who shall sell, offer or expose for in this State any commercial fertilizer or any material to be as a fertilizer, the selling price of which exceeds ten dollars per shall stamp on or affix to each packet of such fertilizer, in a conspic place on the outside thereof, a plainly printed statement which certify as follows:

1. The number of net pounds of fertilizer in the package so offered for sale;

2. The name, brand or trade-mark under which the fertilizer is s

3. The name and address of the manufacturer of the fertilizer;

4. The chemical composition of the fertilizer expressed in following terms:

(*a*) Per centum of nitrogen;

(*b*) Per centum of available phosphoric acid, or, in case of u solved bone, the percentum of total phosphoric acid;

(*c*) Per centum of potash soluble in distilled water.

If any such fertilizer be sold, offered or exposed for sale in such printed statement shall accompany every lot and parcel so offered or exposed for sale.

2. It shall be a violation of the provisions of this Act if the s ment required by section one of this Act shall be false in regard t number of net pounds of fertilizer in the package sold, offer exposed for sale, or in the name, brand or trade-mark under which fertilizer is sold, or in the name and address of the manufacturer o fertilizer. It shall also be a violation of the provisions of this A any commercial fertilizer or material to be used as a fertilizer shall tain a smaller percentage of nitrogen, phosphoric acid or potash is certified in said statement to be contained therein, when such ficiency shall be greater than one-third of one per centum of nitr or one-half of one per centum of available phosphoric acid (or on centum of total phosphoric acid in the case of undissolved bone one-half of one per centum of potash soluble in distilled water.

3. Before any commercial fertilizer or any material to be used fertilizer is sold, offered or exposed for sale in this State, the man turer, importer, or person who causes the same to be sold, offer exposed for sale shall file with the New York Agricultural Experi Station at Geneva, a certified copy of the statement prescrib section one of this Act; and, in addition, such statement shall be thereafter annually during the month of January.

4 No person shall sell, offer or expose for sale in this leather or its products or other inert nitrogenous material in any as a fertilizer or as an ingredient of any fertilizer, unless an ex printed statement of the fact shall be conspicuously affixed to package of such fertilizer, and shall accompany every parcel or the same.

5. Every person violating any of the provisions of this Act forfeit and pay to the people of the State of New York the sum o hundred dollars for every such violation.

6. Every certificate, duly signed and acknowledged, of a ch or other expert employed by the director of the New York Ag tural Experiment Station at Geneva relating to the analysis of any mercial fertilizer, or material to be used as a fertilizer, shall be sumptive evidence of the facts therein stated.

7. The doing of anything prohibited by this Act shall be evi of the violation of the provisions of this Act relating to the thi prohibited, and the omission to do anything directed to be done be evidence of a violation of the provision of this Act relative things so directed to be done.

8. The director of the New York Agricultural Experiment S at Geneva is charged with the enforcement of the provisions Act, and for this purpose may employ agents, chemists and ex and whenever he shall know or have reason to believe that any pe has been incurred by any person for the violation of any of th visions of this Act, or that any sum has been forfeited by reason such violation, he shall report the said violation with a statement facts to the Attorney-general, who, pursuant to the provisio chapter eight hundred and twenty-one of the laws of eighteen hu and ninety-five may cause an action or proceeding to be brought name of the people for the recovery of the same.

9. Chapter four hundred and thirty-seven of the laws of eig hundred and ninety, and chapter six hundred and one of the la eighteen hundred and ninety-four are hereby repealed.

10. This Act shall take effect immediately.

The law was approved and passed on 28th May of this year.

SUPPLEMENTARY DEFINITIONS.

Originally the term "commercial fertilizer" applied to mixtur fertilizing materials sold under trade names, containing nitr phosphoric acid and potash. The term now has a broader applic and includes materials commonly used for fertilizing purposes, wh mixed or unmixed, containing either nitrogen, phosphoric aci potash or any combination of these three elements of plant-food.

The law also applies specifically to "any material to be used as a fertilizer." If there were any doubt in regard to term "commercial fertilizer" covering any forms of unmixed fertilizing materials, such materials would be comprehended under "any material to be used as a fertilizer"

A question may arise as to the interpretation of the phrase, "to be used as a fertilizer." The meaning of the word fertilizer in its broadest signification may be defined as any substance which, by its addition to the soil, is intended to produce a better growth of plants. But the design of those who framed the law was to use the word fertilizer in its more restricted sense, confining it to the materials and artificial mixtures put on the market under specific names, containing either nitrogen, phosphoric acid or potash or any combination of these.

The law therefore applies to all mixtures containing nitrogen, phosphoric acid or potash or any combination of these and also to all unmixed materials containing any of these elements of plant food, when they sell for more than ten dollars per ton. So-called "specials" are also included under the law. Such materials as nitrate of soda, sulphate of ammonia, potash salts, dried blood, tankage, acid phosphate, rock phosphate, bones, &c, &c., all come under the provisions of this law, as prices stand at present.

The law does not apply to cases in which farmers go outside of New York State and purchase fertilizers for their own personal use. They assume their own risks in such cases.

Correspondence.

***We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE PETROLEUM INQUIRY.

(To the Editor of the Chemical Trade Journal.)

SIR,—I have followed with great interest the evidence which so far has been given before the Commission now sitting on the petroleum question, having taken a considerable interest in the question of safe oil and safe lamps for some time past. I should be glad to make a few remarks anent the evidence which has been given by the experts already examined by the Commission. Of Mr. Boverton Redwood's and Sir Frederick Abel's evidence little need be said; the latter does not appear to have had much to do with petroleum of late years, and both appear to be so strongly biassed with the test they devised some years ago that they fail to see that the Standard Oil Co. have succeeded in upsetting the real value of the standard they set up, by altering the character of the oil they supply to this country. There is just one remark on Sir Frederick Abel's evidence which I would like to make. He states that he gets nothing out of the sale of his testing apparatus. Then how comes it that it is so expensive? Surely such an apparatus ought to be made and sold at less than half the price now charged, which is a prohibitory one. Dr. Stevenson Macadam's evidence is very fair, and it is quite evident that he has given close attention to the subject. He shows that the common American oils contain some 10% of naphtha, the removal of which would raise the flash-point from 70° F. to 105° F. This accords with some experiments which I have carried out myself, although I have in some instances from Royal Daylight Oil obtained more than 10% of naphtha; in one case some 17% was got, while all the samples had some heavy oil not distilling under 500° F. Another rather interesting point is the experiments he describes on the evaporative power of the oils. While in 14 days Scotch oils only rose 1° in gravity and 5° F. in flash-point, American oils rose 9° in gravity and 50° F. in flash. Russian oils, while rising very considerably in these points, were sensibly below the American oils. Sir Henry Roscoe's evidence corroborates that of Dr. Macadam. Prof. Dewar is evidently imbued with a love of the 73° test, although he suggests a standard of 212° F. if safety is to be assured. It is doubtful if Prof. Dewar is a large user of lamps, or he would have known that an oil with a flash-point, Abel test of 212° F., would not burn in any lamp that is now made; it is much too heavy and too deficient in capillary power; it is even doubtful if it would burn in the lamps used in pre-petroleum days. It seems to me that more stress might be laid on having an oil with a flash above that of any temperature to which it might be subjected in ordinary use; a standard of 100° to 105° F. will ensure that. It is rather curious to see that the War Office on the advice of Sir Frederick Abel (!) will not use a 73° oil, but require an oil of 105° to 110° flash. While Prof. Dewar thinks that 212° F. is necessary to ensure safety, Prof. Lunge thinks 120° will ensure absolute safety. I should not like to be so positive on this point, but still a rise to 110° will bring about comparative safety I see that Prof. Chandler, of New York, states that the abstraction of the naphtha will increase the cost of the oil 50%, but this is rather wide of the mark, for it has been shown by the Scotch chemists that increasing the flash-point will raise the price of oil only ½d. per gallon, while we know that the operations of the Standard Oil Co. will raise it 50% without any chemical treatment at all.—I am, etc.,

GEORGE H. HURST.

(To the Editor of the Chemical Trade Journal.)

SIR,—The opinions expressed by some of the witnesses before the Parliamentary Committee on Petroleum, as chronicled in your last issue, strike me, a chemist uninterested in oil, as strangely illogical.

According to these opinions a 73° oil is perfectly safe for the poor man's dwelling, where we usually find several children in a very small room, with a lamp on a table, but it is far too dangerous for use amongst able-bodied and drilled adults. Again, Professor Dewar says there is little, if any, difference in safety between 73° and 100° flash-point, yet Sir H. Roscoe finds that the temperature of the oil in the fount of a lamp which has been burning for four hours is higher than the present flash-point, but below 102°. Now, if an oil has a flash-point of 73°, and another of 100°, the very fact of these different points existing shows that there is greater risk with the low oil than with the higher. It is equivalent to telling us that the vapour of phosphorus is no more dangerous than, say, the vapour of alcohol. This flash-point question must be looked at in the light of a detonator and an explosive. Eliminate the detonator, and some explosives are comparatively harmless; but add certain bodies and their dangerous point is more nearly approached, whilst the addition of the explosive's true detonator increases the danger to the maximum. Now, the main part of burning oil is safe for use under any condition if we elminate the small percentage of low flash oil or spirit, which is really the explosion producing part, and that which sets the remainder of the oil on fire. The point now is to get rid of the spirit or naphtha in inverse proportion to the risk we care to run in the use of such oil. There can be no doubt in a scientific and logical mind that oil with a flash-point of 102° is far superior in point of freedom from danger than the present oil.

Some witnesses have tried to produce explosions by throwing about lighted lamps, but it can be readily seen that it is futile to try such experiments. If there are ten million lamps in use every night the percentage of accidents of all kinds will be low, say, $\frac{1}{10}$%, or 100 in all, and of these accidents only a small percentage will be serious; so that one might throw down a hundred lamps and not get one ignition. There is an element of chance about these accidents, and there is only one way to reduce it—that is, to raise the flash-point. Iron vessels are of no use, for if of cast iron they would be almost as easily broken as glass, and they at the same time increase the risk by raising the temperature of the oil nearer the flash-point, or above it, and jointed vessels would leak slightly sooner or later. Safety is to be looked for in the oil, and not in the lamp, as is shown by the Zurich Canton enacting that lamps shall be constructed so that the *temperature* of the oil does not rise 5°C. above that of the air. This is but half a remedy. We in England want the whole. It is of little matter to us what is done in Germany, Switzerland, or elsewhere; but as long as there are accidents nightly in this country, more or less serious, which can be in a large degree obviated by the use of a better oil, it becomes the duty of the Legislature to enforce the use of such oil.

It is to be hoped that the gentlemen of the Committte will take at its true value the evidence of those who have "an axe to grind," for they seem to be in a majority —I am, etc.,

PRO BONO PUBLICO.

DIVULGING TRADE SECRETS.

IN the Chancery Division, on Monday, Mr. Justice North had before him the case of Edge and Sons, Limited, *v.* Knowles. This was an action to restrain the defendants from making use of trade secrets, and came on by way of a motion and judgment in default of defence, the defence having been struck out for non-compliance with an order for inspection. Mr. John Cutler, who appeared for the plaintiffs, said the company carried on business in Bolton as manufacturers of a special kind of blue, known as "Bleecher's Blue." The allegation against the defendant first named in the statement of claim was that while in the plaintiffs' employ or in the employment of their predecessor, Mr. William Edge, he had obtained the secret of the manufacture of this blue, which secret he had communicated to his son, or sons-in-law, and was proposing to manufacture it himself. There was no appearance on behalf of the defendants. Mr. Justice North made an order restraining defendants from using or communicating any trade secrets obtained confidentially while in the employ of the plaintiffs or their predecessors, for the delivery up of such secrets or recipes in his possession, and for an inquiry as to damages. Defendants were ordered to pay the costs of the action.

BLOWING IN A NEW BLAST FURNACE —At the Acklam Ironworks, Middlesbrough, which are now practically under the same management as the North Eastern Steel Works, a new blast furnace has within the past few days been blown in. A large output from this furnace is expected of basic pig iron, which is the sole manufacture of these works. At present the company have all their four furnaces in operation, but one will shortly be blown out for repairs and alterations.

Trade Notes.

Phosphate of Ammonia.—This product, which is being specially introduced by Mr. P. Segner, of 8, Dickinson-street, Manchester, as a fixing agent in the dyeing and calico printing trades, promises to be a valuable substitute for the commonly used phosphate of soda. The ammonium salt contains, weight for weight, more than three times the quantity of phosphoric acid present in phosphate of soda crystals. The following shows their comparative strengths:—To obtain 142 lbs. phosphoric acid (anhydrous), it requires 716 lbs. phosphate of soda crystals; whereas it is claimed that only 230 lbs. phosphate of ammonia are required.

The Imperial Institute.—The scientific and practical research department of the Institute has recently received important additions to its resources from two City Companies. The Goldsmiths' Company has contributed a second donation of £1,000 to the special funds of that department, to be applied to the extension of its laboratories and to their better equiptment. The Salter's Company has established a Research Fellowship of the value of £150. per annum, in connection with the scientific department, tenable by chemists thoroughly qualified to undertake the investigation of new or little known natural products received by the Imperial Institute from the colonies and India.

Coal at Wigan.—A big coal find has been made by the workmen of the Garswood Coal and Iron Company at Bryn, near Wigan. A shaft had been sunk to a depth of 540 yards, and this week a four feet six inches seam was met with. Preparations were at once made to open out the bed, which it is expected will take between forty and fifty years before it is worked out. Places for as many men as the coal Mines Regulation Act will allow for a single mine not connected with a ventilating shaft have been provided, and work begun in earnest. It is only six weeks ago that 300 men were thrown out of employment whilst the sinking operations at an adjoining colliery to afford a means of ventilating another pit were conducted. It is anticipated that directly the two pits are connected work will be found for a large number of men.

Petroleum Fatalities.—A shocking explosion occured in Birmingham on Tuesday, seriously injuring a woman and her daughter. The woman turned down a lamp which had been alight all night. It burst and the lighted oil fell on the woman and her five-year-old child. The father was also burnt in extinguishing the flames, and the woman and child were removed to the hospital in a state of collapse.—Mr. E. A. Carttar held an inquest on Tuesday, at Bermondsey Town Hall, concerning the deaths of Sarah Millward, aged 7 years, Ada Millward, aged 5 years, Martha Millward, aged 4 years, and Bertie Millward, aged 8 months, who lost their lives at a fire last Friday night at No. 1, Rudyard-place, Kipling-street, Bermondsey. The jury returned a verdict to the effect that the deceased children were burned to death in a fire caused by a defective lamp. They recommended that the dangerous nature of these lamps be more publicly declared.

Still Wanting More.—A rumour is current in the petroleum trade that Messrs. Goepel and Trube, the large exporters of petroleum products, had sold their interests to the Standard Oil Company, and that a large German House was included in the deal. Inquiry at the export department of the Standard failed to elicit any information upon the subject, while Mr. Trube flatly denied any knowledge of the transaction, and stated that there was no change in the relations of his house to the trade. Outside sources expressed confidence in the truth of the rumour, and the transaction was reported to account for the recent rise in refined oil. This advance, however, as will be seen by our market reports, was credited by the trade to other causes. It certainly is not likely that Messrs. Goepel and Trube, would "know" anything about it for it is on a policy of strict secrecy as to the real proprietorship that the S. O. has acquired the command of American refineries.

Education of Technical Chemists.—In describing the nature of the education which technical chemists receive in Germany, Dr. Duisberg states that at Bayer's works in Elberfeld and Leverkusen the laboratory recuits are from the high schools, and have had one or two years with the professors. The recruit spends his first year in the experimental dye and print laboratory; he then passes into the scientific laboratory, and it becomes his duty to keep the principals informed of everything new that appears in their field of manufactures in literature, patents, &c. He produces a few colours on his own account, experiments with the products of rival firms, and gradually he is worked into some special branch. Every fortnight the chemists of the establishment meet the director of the works, when *everyone, from superintendent down to the youngest recruit, is required to make a report* of his work, and to relate any difficulties or problems which have come under his notice since the previous meeting. These chemists must be chemists, not chemical engineers, a combination which the author roundly condemned.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue firm, 90's being quoted 3s. 1d. for prompt and a penny lower for Aug.-December. 50/90's 2s. 5d. to 2s. 6d., according to period of delivery. There has been a fairly good business doing in both sections of the market. Crude carbolic acid is rather easier at 2s. 2d. for 60%, while 40% crystals stand at 7¼d., a slight advance on last quotation. There is practically no change in solvent naphtha or crude. Anthracene and creosote quiet. Pitch steady at 32s., f.o.b. East Coast.

Sulphate of ammonia has gone weaker at nearly all the ports. The demand is nearly sufficient to absorb the present production, so that it is all the harder to comprehend the change in values. Closing quotations are: London outside makes £8., Liverpool £8. 2s. 6d., Hull £8., and Leith £7. 15s. to £7. 17s. 6d., all prompt. Nitrate of soda steady.

REPORT ON MANURE MATERIAL.

There has been rather more activity in the market, but for the most part buyers are very indifferent about covering their requirements ahead. On the Continent further business has been done in 75/80% Florida rock for 1897 steamer shipment at a fractional advance, and there is further inquiry; but for United Kingdom there is nothing doing. South Carolina river rock continues to offer at 5d. per unit, in cargoes, c.i.f. to United Kingdom, and this price would now be accepted for 58/63% Algerian. The quotations for Belgian phosphate are unchanged. £3. 15s. would now be accepted for River Plate bones, afloat, but this price is still rather above buyers' ideas. The quay having been cleared of Bombay bone meal, £4 per ton is now required, ex store, but £3. 15s. to £3. 17s. 6d. per ton, according to quality, would be accepted for parcels afloat or near at hand. For shipment £3. 17s. 6d. to £4. per ton is quoted. Crushed Kurrachee bones for shipment are quoted £4. per ton, ex quay Liverpool or Hull. Nitrate of soda is firm at 7s. 10½d. per cwt. for ordinary, and 8s. per cwt. for fine quality. Due cargoes are now worth about 7s. 11¼d. per cwt. A parcel of River Plate tanking, arrived Liverpool, has been sold at 6s. 6d. per unit of ammonia, and 6d. per unit phosphate of lime, in bags, gross weight, ex quay.

MISCELLANEOUS CHEMICAL MARKET.

The general tone of the market in the alkali trade is firm, with better inquiry for export in most of the leading products. Bleaching powder is in better demand, at £6 10s. to £6. 15s. f.o.b., and £6. 15s., f.o.r., makers' works. Alkali, 58%, steady, at £3. 7s. 6d., bags, f.o.r. makers' works. Soda crystals, 35s. per ton. Caustic soda without change, viz.: F.o.b., Liverpool, 77%, £9. 7s. 6d; 74%, £8. 7s. 6d.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. net, 10 ton lots and upwards. Chlorate of potash, 4⅜d. to 4½d. Chlorate of soda, 5¾d. The market for sulphur has rather a firmer tendency for forward delivery, quotation on the spot being £3. 17s. 6d., makers' works. For white powdered arsenic there is still good inquiry, and with no stocks on hand price is firm, at £22. 15s. to £23. Potash, carbonate, is dearer, at £17. 15s. to £18., c.i.f. Caustic potash unchanged. Permanganate of potash scarce and dearer, at 75s. per cwt. In sulphate of copper there is no change to report during the week. Prussiate of potash, 6¾d. to 7d. Cyanide, 1s. 1d. For sulphocyanides demand is light, and prices slightly depressed. Nitrate of soda remains a steady market at 7s. 10½d., with a firmer tone for forward delivery. Carbolic acid, crystals, dearer, at 7¼d. to 7½d. for 39/40. Aniline oil and salt firmly maintained in price. In the general chemical trade there is no report of improvement.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron: Scotch warrants closed at 46s. 5d.; Middlesbrough 36s. 10½d. cash, and hematite 46s. 5½d. Copper, dull: Chili bars, G. O. B.'s and G. M. B's., closed at £49. 10s. to £49. 15s. cash, and £49. 13s. 9d. to £49. 18s. 9d. three months. Tin, quiet: Straits closed at £61. 2s. 6d. to £61. 12s. 6d. cash, and £61. 12s. 6d. to £62. 2s. 6d. three months; Australian, £62. 5s.; English ingots, £65. Lead, firm: Spanish, £11. 1s. 3d. to £11. 2s. 6d.; English, £11. 3s. 9d. to £11. 5s.; Silesian spelter, ordinary, £17. 15s. Nickel, 1s. 2½d. Antimony, £30. Quicksilver: First hands, £6. 7s. 6d.; second hands, £6. 6s. 6d.

Copper shares, quiet: Cape, 2 9/16 to 2 11/16; Copiapo, 2 9/16 to 2 11/16; Libiola, 2 7/8 to 3 1/8; Mason and Barry, 3 1/8 to 3 3/8; Rio Tinto, 24 7/16 to 24 7/16; Tharsis, 5 3/4 to 6.

GLASGOW, WEDNESDAY.—Market flat, with moderate business. Scotch done at 46s. 7d. and 46s. 5d. cash, also at 45s. 6½d. and 46s. 5d. one month; closing with buyers at 46s 5d. cash and one month, sellers ask 46s. 5½d. Cleveland done at 37s. 1½d. one month; closing with buyers at 36s. 10½d. cash; sellers ask 36s. 11d. Cumberland hematite done at 46s. 6½d. cash, also at 46s. 9d. one month; closing with buyers at 46s. 5½d. cash, sellers ask 46s. 6d. Middlesbrough hematite closes with buyers at 44s. 2d. cash, sellers ask 44s. 3d.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is sluggish, and there is very little doing with the exception of a moderate business in Lagos at £18. 10s, Aug.-Sept. Olive keeps steady, although the demand is but limited. Linseed is easier, but steady at the fall - Liverpool makes in export casks are quoted 17s. 3d. to 19s. 6d., according to quality. Cottonseed is unchanged, with a better demand for Liverpool refined at 16s. to 16s. 6d. per cwt. Castor oil is moving fairly well, good seconds Calcutta being quoted 3¼d., and Madras 2 13/16d. to 2 7/8d. per lb. There have been some sales of tallow at current rates, but there is not much doing. Resin is without anything fresh to report: Spot parcels move off quietly, otherwise there is little doing. Spirits of turpentine are down to 19s. 9d. per cwt, and are now being steadily held thereat, as the demand is rather better. Petroleum quietly steady, 6¼d. to 7½d. for American, and Russian refined 5½d. per gallon.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Before the close of the week the whole of the works of this quarter will be closed down for the annual holidays, and the market shows signs already of the approaching suspension. There is little doing, and no chance of anything better now until the holiday is fully discounted and production has been resumed. The most well employed of the works will close for at least a few days; the slackest of them will stretch the stoppage to a full fortnight or more. The only features of the general market are an easier feeling in chlorate of potash, bleaching powder, and sulphate of copper, and rather smaller reserves of soda crystals, the heat interfering with the manufacture. Sulphate of ammonia has continued to weaken, and the low figure of £7. 15s. has been several times accepted. Some holders, however, have declined to go below £7. 17s. 6d., but the mean value is between £7. 15s. and £7. 16s. 3d. Nothing at all forward. Oils and paraffins all unchanged, and quiet, waiting the advent of the new consumptive season.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. 10s. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 10s., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 1¼d.; sulphate of ammonia, £7. 15s. to £7. 16s. 3d. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £17. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2 1/16d. to 2¼d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 158,211 mats cane unrefined, and 4,291 baskets cane unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical trade still remains quiet, and with practically no alteration in prices. Soda crystals, £2. 2s. 6d. per ton, gross weight locally. Caustic, 76/77%, £9. to £9 10s. per ton; 70%, £9. to £7. 15s. per ton. Sulphur scarce, and in demand at £4. to £4. 5s. per ton.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s., per ton, nett; recovered sulphur, 2 cwt. bags, £4. 5s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2 15s. per ton, nett; white alkali, 48%, £4. 10s. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 15s. per ton, nett; do., 100° Tw., £3. 2s. 6d. per ton, nett; do., 140° Tw., £3. 10s. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95%, crude calcined, £6. per ton, nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. per ton, f.o.b., Tees.

COALS.—Trade continues fairly steady, with gas coals in better demand. Best Northumbrian steam are firm, at 8s. 6d. to 8s 9d. per ton. To-day's prices are:—Best Northumbrian steam, 8s. 6d. to 8s. 9d. per ton; second qualities, steam, 7s. 6d. to 7s. 9d. per ton; small steam, 3s. 6d. to 3s. 9d. per ton; bunker coals, 6s. 3d. to 6s. 6d. per ton; gas coals, 6s. 6d. to 6s. 9d. per ton; coke, firm, 15s. to 15s. 6d. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—This market is utterly demoralised; some time ago it was said that prices of cotton and linseed oils could fall no lower, and since that time every market report has registered a continuous downfall until to-day, when linseed oil has broken its record with sellers for spot at 15s. 1½d. The principal imports to date have been: Linseed, 378,869 quarters against 296,921 quarters; Rapeseed, 58,962 quarters against 81,836 quarters; Cottonseed, 97,127 tons against 99,004 tons; Olive oil, 12,643 casks against 6,874 casks; Rape oil, 2,256 casks against 5,060 casks; Tallow, 39,025 cwts. against 8,006 cwts; Turpentine, 10,844 barrels against 10,861 barrels. The quotations for linseed oil are 15s. 1½d., naked, spot sellers; forward July-August 15s. 4½d, last four monts 15s. 7½d., and first four months 16s. 1½d. Boiled and refined from £1. to £2 per ton extra. Export for the week, 2,520 cwts. Refined cotton oil is flat at 13s 9d. per cwt., spot, naked; forward, July-August 13s. 10½d., November-April sellers at 14s. 4½d.; barrels 30s. and ordinary casks £1. per ton extra. Export of refined oil for the week has been 4,660 cwts. Danish butter is quoted 94s. to 96s. per cwt. Turpentine 20s. per cwt. Cod oil £17. to £19. per ton. Castor oil from 2½d. per pound. Olive oil from £28. to £34. per tun. A good boiled oil substitute is offered at £11. 10s., in barrels. Brown Yorkshire grease £8. per ton. Herring oil £13 per ton.

CAKES are a quiet market, with no alteration in price.

PAINTS.—Makers continue very busy supplying the requirements of both the home and foreign markets. White and red leads in steady demand, prices unchanged. Dry mineral colours £3. 10s. to £8 per ton. Ultramarines 3d. to 8d. per lb. Black, blue, red oxide and venetian red paints from £11. per ton. Ready mixed paints from 24s. Paint remover in good demand, 25s. to 30s. per cwt. Imperial black varnish £5. 10s. per ton. Oak varnish from 5s. 6d. per gallon.

New Companies.

Bakan Company, Ltd.—CAPITAL, £150,000, in shares of £10. each, divided into 5,000 preference and 10,000 ordinary. This company has been formed to manufacture products by chemical and other means from Bakan trees. The subscribers to the memorandum of association are:—W. Anderson, Mertorn, Helensburgh, silk manufacturer: W. A. Smith, Taybank, Helensburgh, merchant; J. Reid, 15, Montgomerie Crescent, Glasgow, merchant; J. Melrum, 6, Doon Ter., Pollokshields, Glasgow, silk manufacturer; R. M. Patison, 8, Spiersfield, Paisley, chemical manufacturer; W. H. Malcolm, [illegible]

St. Vincent-street, Glasgow, writer; P. Honstin, 13, Eldon-street, Greenock, civil engineer.

Carpathian Petroleum Company, Ltd.—Capital, £60,000., in shares of £1. This company has been formed to acquire lands and rights in Hungary and Roumania, and to trade as oil refiners, chemical manufacturers, etc. The subscribers to the memorandum of association are:—A. W. Arnup, Brooklands, S. Benfleet, Essex, stationer; E. J. Wright, 42, Claverton-street, Pimlico, stationer; J. Aitken, 17, Burgoyne-road, N., clerk; A. V. Chudleigh, 267, Dashwood House, E.C., gentleman; G. M Sargent, 4, Moreton Gardens, S.W., gentleman; W. H. Butterfield, 31, Moray-road, Finsbury Park, clerk; H. W. Evans, 13, Jeffreys-road, Clapham, clerk.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 4th.

Acetate of Lime—
U. States, 205 bgs. Lister & Biggs

Acetic Acid—
Holland, 1 pk. G. Rahn & Co.
" 107 A. & M. Zimmermann
" 100 R. W. Greeff & Co.
" 254 Little & Johnston
Germany, 3 H. Lorenz

Acetone—
Germany, 10 drs. Thames S. Tug & L. Co.

Alum—
Germany, 2 cks. T. H. Lee

Asbestos—
Germany, £43 Craven & Co.
Italy, 100 Bender & Marting
Canada, 980 J Owen
" 13 W Byford
" 250 Deering & Robottom
Italy, 115 Brit. Asbestos Co.
Holland, 360 J. Barber & Co.

Barium Chlorate—
Germany, 23 cks. Petri Brs.

Barytes—
Belgium, 36 cks. Fleming's Oil & Chem. Co.
Holland, 57 D. Storer & Sons
Germany, 43 Proprs. Dowgate Dk.
Belgium, 110 J. L. Lyon & Co.
Holland, 44 Robertson, Sellery & Co.
Germany, 38 E. J. Diggins
Belgium, 100 O'Hara & Hoar
Germany, 500 bgs. C. F. Webster & Co.
Belgium, 14 R. W Greeff & Co.

Bleaching Powder—
Germany, 61 cks. H. Wallace & Co.

Bleaching Soda—
Germany, 53 cs. H. Lambert

Boracic Acid—
Germany, 6 pks. L. & I. D. Jt. Co.

Bromide of Iron—
Germany, 13 cks. A. & M. Zimmermann

Bromine—
Germany, 20 cs. A. & M. Zimmermann

Camphor—
Germany, 56 tubes S. Figgis & Co.
" 4 cks. T. H. Lee
France, 200 cs. R. Warner & Co.

Caoutchouc—
E. Indies, 140 c. Ross & Deering
Aden, 11 Clarke & Smith
France, 100 Prop. Bull Wf.
E. Indies, 58 Ralli Brs.
Germany, 21 T H. Lee
France, 23 H. Johnson & Sons
Zanzibar, 32 L. & I. D. Jt. Co
Penang, 324 E. Boustead & Co.
U. States, 74 Prop. Bull Wf.
Belgium, 25 W. Balchin
Spain, 2 Page, Son & Co.
E. Indies, 19 Stewart, Hall & Co.
" 36 Prop. Bull Wf.

Carbonate of Lime—
Germany, 36 cks. Schuck & Co.

Castor Oil—
Italy, 70 cs. Stebbing & Co.
" 25 City Coml. Wf. Co.
" 10 L. & I. D. Jt. Co.
France, 46 brls. R. G. Hall & Co.
" 31 Phillips & Graves
Italy, 5 B. G. Lennon & Co.
" 12 Evans, Lescher & Co.
France, 29 pks. W. J. Murray
Belgium, 58 bls. Perkins & Honer
" 60 R. G. Hall & Co.

Chemicals *(otherwise undes.)*—
Holland, £35 T. H. Lee
Germany, 328 Phillipps & Graves
" 490 A. & M. Zimmermann
Holland, 25 R. W. Greeff & Co.
" 35 J. Barber & Co
" 16 H. Lorenz
France, 152 Flageollet & Co
Belgium, 117 Société John Cockerill
Germany, 50 L. & I. D. Jt Co.
" 20 R. W. Harris
Belgium, 18 T. H. Lee
Holland, 15 Hemu, Peron & Co.
" 40 J. M. Steel & Co.
Germany, 309 T. H. Lee

Copperas—
Holland, 10 cks. A. & M. Zimmermann

Cream of Tartar—
France, 5 cks. M. Ashby, Ld.
" 30 Finlay & Co.
" 65 B. & F. Wf. Co.
" 10 W. C. Bacon & Co.
Holland, 20 Kirkpatrick & Co.
France, 5 W. J. Bush & Co.
Holland, 4 B. & F. Wf. Co.
Portugal, 5 "

Dextrine—
Germany, 6 cks. Beck & Pollitzer

Dyestuffs—
Argois
Natal, 120 bgs. A. & W. Nesbitt
Italy, 146 Thames S. T. & L. Co.
Extracts
Denmark, 7 cs. W. A. Sparrow & Co.
France, 50 cks. B. & F. Wf. Co.
B. Ayres, 200 bgs. Beresford & Co.
Austria, 200 brls. A. J. Humphery
" 66 J. Graves
France, 20 cs. Bailey & Leetham
Gambier
Singapore, 176 bgs. Brinkmann & Co.
Indigo
E. Indies, 13 chts. R. von Glehn & Sons
" 26 L. & I. D. Jt. Co
Belgium, 1 Société John Cockerill
E. Indies, 12 Ernsthausen & Co.
" 4 Lewis & Peat
Logwood
B. Honduras, 346 t. W. Shelcott
B.W.I., 51 T. Hankey & Co.
Myrabolams
E. Indies, 1,000 pkts. A. B. Curtis & Co.
Saffron
Spain, 1 cs. L. & N. W. Rly.
Tanners' Bark
Adelaide, 194 t. Beresford & Co.
Auckland, 9 L. & I. D. Jt. Co.
Melbourne, 76 Brown & Elmslie
" 91 Dyster, Nalder & Co.
Valonia
France, 1 t. S. Figgis & Co.
A. Turkey, 7 M. D. Co.

Dyestuffs *(otherwise unascribed)*
France, 30 bls. Skilbeck Brs.

Farina—
Germany, 50 bgs. Dunlop Brs. & Co.
" 100 Seaward Brs.
Holland, 100 J. Barber & Co.
Germany, 2 M. D. Co.

French Chalk—
Austria, £80 Taylor Brs.
Italy, 200 bgs. W. Harrison & Co.

Glucose—
U. States, 3 pks. 16 c. H. W. Peabody & Co.
" 2,500 2,500 c. Beresford & Co.
" 1,500 1,500 J. Tulford
" 650 650 Knowles & Padgett
" 100 600 T M. Duche & Sons
" 50 300 C. Southwell & Co.
" 50 300 Deering & Robottom
" 250 500 L. & I. D Jt. Co.
" 300 381 Beliamy & Co.
" 50 300 Page. Son & East
" 50 300 Union Ltge Co.
France, 200 200 W. E. Cole
U. States, 250 250 G. Hedges & Son
France, 200 203 G. Clark & Son
U. States, 500 500 "

Glue—
——, £894 ——

Guano—
Peru, 1,235 t. Anglo-Contl. G. Wks.

Lead Acetate—
Germany, 15 cks. F. Boehm

Manure—
Germany, 23 t. F. W. Berk & Co., Ltd.
" 10 Ekman Pulp & P. Co.
Sydney, 4 Anning & Cobb

Metallic Oxide—
Germany, 3 cks. Brit. Anti-Fouling C. Co.

Methyl Alcohol—
Germany, 21 dms. Stein Brs.
" 1 Lister & Biggs
" 7 Sutton, Carden, & Co.
U. States, 100 brls. J. Whalley

Mica—
E. Indies, £2382 J. Mitchell
" 1145 W. M. Smith & Sons
Germany, 10 c. H. Lambert
U. States, £80 W. Dixon

Molasses—
Egypt, 14,000 c. 1 tank Honeywill Brs.

Ochre—
Holland 10 pks. Phillipps & Graves
France, 45 cks. Burrell & Co.

Phosphate Rock—
U States, 2,450 t. Wyllie & Gordon
Germany, 50 Anglo-Contl. G. Wks.
Belgium, 340 "
" 160 Lawes Chemical Manure Co.

Phosphoric Acid—
Germany, 4 pks. Beck & Pollitzer

Pitch—
Germany, 83 bgs. Poth, Hille, & Co.

Plumbago—
Germany, 10 cks. P. Hecker & Co.
Ceylon, 387 Vokins & Co.
" 384 Williams, Torrey, & Co.
" 85 Doulton & Co.

Potashes—
Canada, 129 c. S. Ward & Co.
" 44 brls. M. D. Co.

Potassium Bromide—
France, 1 ck. J. Burnett & Sons

Potassium Carbonate—
Germany, 105 c. A. J. Luke & Co.
" 100 Petri Brs.
France, 100 "

Quicksilver—
Italy, 100 flsks. H. Bath & Son

Rosin—
U. States, 1,300 brls. T. Nickels
" 500 Moore & Hole

Saltpetre—
E. Indies, 891 bgs. Arracan Co.
Holland, 15 cks. J. Owen
Germany, 112 P. Hecker & Co.
E. Indies, 242 Co-op. Lightrge. Association
Germany, 20 T. H. Lee
" 1 L. & I. D. Jt Co.
E. Indies, 623 Lyall, Anderson, & Co.
" 283 L. & I. D. Jt. Co.

Sheep Dip—
N. Zealand, 49 pks. Welch, Perrin, & Co.

Soda Ash—
Holland, 40 c. R. Waters

Sodium Hyposulphite—
Holland, 280 c. R. W. Greeff & Co.

Sodium Silicate—
Holland, 6 cks. Carey & Sons

Sodium Sulphate—
Holland, 30 cks. H. Wallace & Co.

Starch—
Belgium, 201 cs. A. Brown
Holland, 40 Hemu, Peron, & Co.
" 30 Phillipps & Graves
Belgium, 12 Hammond & Co.
Germany, 132 Phillipps & Graves
Belgium, 210 T. H. Lee
France, 90 B. & F. Wf. Co.
Holland, 156 T. H. Lee
" 2,270 Little & Johnston
Belgium, 40 Leach & Co.
" 980 E. & T. Pink
" 82 J. Harrison
Holland, 220 J. T. Morton

Stearine—
Germany, 10 cks. R. Heydemann
France, 278 bgs. H. Held
" 295 W. E. Cole
" 250 G. Boor & Co.
Belgium, 125 H. Hill & Sons
U. States, 11 cks. L. & I D. Jt. Co.
Holland, 26 bls. J. Owen

Sulphur—
Italy, 52 t. J. Kitchin, Ltd.
" 5 Typke & King

Tar—
Germany, 100 brls. W. Beard & Son

Tartaric Acid—
Holland, 30 pks. Kirkpatrick & Co.
" 21 B. & F. Wf. Co.
Italy, 20 "
" 20 F. C. Devon & Co.
Holland, 14 "

Ultramarine—
Holland, 4 cks. Haeffner, Hilpert, & Co.
Germany, 15 pks. Steinhoff, Sons, & Co.
Holland, 4 cs. Phillipps & Graves

Varnish—
Canada, 5 pks. Elder, Dempster, & Co.

Verdigris—
France, 4 cks. L. & I. D. Jt. Co.
" 4 C. F. Gerhardi

White Lead—
Germany, 39 cks. D. Storer & Sons
France, 19 J. Watt & Son
Holland, 22 A. Zumbeck & Co.
" 20 Taylor Brs.
Belgium, 23 Perkins & Honer
" 39 Leach & Co.
Germany, 5 H. Lambert
" 100 Steinhoff, Sons, & Co.
France, 1 Taylor Brs.
Holland, 51 Burrell & Co.

Wood Pulp—
Holland, 1,008 pks. Moreton Cox & Co.
" 160 W. H. Cook
Germany, 50 H. C. Everett
" 204 Teugh & Henderson
Sweden, 640 W. G. Taylor & Co.
Norway, 369 "
" 4,610 Moreton Cox & Co.

Holland, 26 L. Knoblauch
Germany, 800 E. J. & W. Goldsmith
" 86 W. Friedlaender
Norway, 500 Tough & Henderson
Germany, 200 Beadle Brs.
" 300 Christophersen & Co.
Belgium, 2,459 E. J. & W. Goldsmith
Germany, 5 Craven & Co.

Zinc Oxide—
Germany, 50 cks. Prprs. Dowgate Dk.
" 500 Soundy & Sons
Holland, 1 J. L. Lyon & Co.
Belgium, 20 "
Germany, 250 brls. M. Ashby, Ltd.
Sydney, 945 bgs. J. Greig
Holland, 50 brls. M. Ashby, Ltd.
U. States, 200 "

LIVERPOOL.

Week ending July 2nd.

Acetic Acid –
Rotterdam, 275 cs. 17 blns.

Albumen—
Marseilles, 5 cs.

Barytes—
Antwerp, 50 bgs.

Bone Ash—
B. Ayres, 254 bgs.

Bone Meal—
Rangoon, 500 bgs.

Boracic Acid—
Leghorn, 195 cks.

Borate of Lime—
Antofagasta, 5,850 bgs.

Borax—
Valparaiso, 412 sks.

Caoutchouc—
Valparaiso, 6 bgs. W. Brandts, Sons & Co.

Castor Oil—
Kurrachee, 31 brls. J. J. Mack & Sons
" 847 10 cs.
" 4 Globe Express Co.
Leghorn, 10

Chemicals *(otherwise undescribed)*
Trieste, 3 pks.

Chloroform—
Rotterdam, 1 cs.

Colours—
Rotterdam, 20 cks.
Ghent, 6 brls. J. T. Fletcher & Co.

Copper Sulphate—
Baltimore, 144 brls.

Cottonseed Oil—
N. Orleans, 1,598 brls.

Cream of Tartar—
Marseilles, 10 brls.
Tarragona, 5 pps. Sachse & Klemm
Marseilles, 1 ck. Morrish & Co.

Dyestuffs—
Cutch
Singapore, 400 bxs.
Rangoon, 1,405
Divi Divi
Hamburg, 332 bgs.
Extracts
Hamburg, 92 cks. 35 cs. 396 bxs. 1 brl.
Fustic
New York, 3,135 ps. B. Ackerley & Sons
Vera Cruz, 1,445
Tampico, 2,613 H. Kendall & Sons
Gambier
Singapore, 349 bgs.
Logwood
San Domingo, a qty. Frame Alston & Co.
New York, 540 t.
Kingston, a qty.
Madder
Boston, 10 cks.
Myrabolams
Bombay, 2,629 bgs.
Orchella
Coquimbo, 1 ble. Schintz & Co.
Shumac
Palermo, 50 bgs. J. Kitchin, Ld.
" 1,385
Turmeric
Bombay, 143 bgs.
Valonia
Syra, 584 bgs.

Farina—
Fiume, 300 bgs.
Stettin, 30 T. MacMullan & Co.
" 200

Glucose—
Hamburg, 50 cks.
New York, 189 brls.
Boston, 450
Baltimore, 50

Glue—
St Nazaire, 100 bls.
Rotterdam, 200 bgs.
Stettin, 30 Schlee & Sankey

Guano—
Fray Bentos, 6,426 bgs. Liebig's Extract Meat Co., Ld.

Lamp Black—
Gothenburg, 50 cks. 100 cs.

Limestone—
Antwerp, 2 crts. J. T. Fletcher & Co.

Lithopone—
Rotterdam, 40 cks.

Magnesia—
Trieste, 2 cs.

Manganese Ore—
Kobe, 768 t. 10 c.
Poti. 3,820

Manure—
Bordeaux, 191 bgs.

Minium—
Rotterdam, 8 cks.

Nitrate—
Taltal, 5,744 bgs. Julia Taltal Nitrate Co.

Ochre—
Marseilles, 10 brls. Birmingham Colour Co.
" 182

Paraffin Scale—
New York, 845 brls. Thompson & Bedford

Phosphate—
Valencia, 1 bx.

Pitch—
Marseilles, 47 brls.

Plumbago—
New York, 1 bx. R. Crooks & Co.
Genoa, 100 bgs.

Potash—
Montreal, 3 brls. H. Moore & Co.

Potassium Phosphate—
Valencia, 20 cks.

Pumice Stone—
Leghorn, 20 bgs.

Pyrites—
Huelva, 4,527 t. Matheson & Co.

Rosin—
Baltimore, 100 brls.

Salt—
Hamburg, 10 cs.

Saltpetre—
Hamburg, 14 cks. 150 kgs. 1 brl.
Karachi, 108 bgs.

Soap—
Marseilles, 117 cs.
New York, 250 brls.
Leghorn, 250 bxs. Weaver & Sterry
" 50
Montreal, 1 W. H. Boyce
Genoa, 3 51
Philadelphia, 63 crts. 800

Soapstone—
Genoa, 100 bgs. G. Huntries
Bordeaux, 300 G. G. Blackwell, Sons & Co.

Sodium Nitrate—
Iquique, 10,914 bgs. G. C. Dobell & Co.
Caleta Buena, 4,706

Starch—
Bremen, 5 bgs. 14 cs.
New York, 158 sks.
Boston, 100
Hamburg, 432 cs.
Rotterdam, 41
Baltimore, 500 bxs.
Philadelphia, 1,600 A. Gabain & Co.

Stearine—
Marseilles, 97 bgs.

Tallow—
Boston, 50 hds. 100 tcs. Stolterfoht, Sons & Co.
New York, 50
Philadelphia, 100

Tartar—
Naples, 3 cks.
Bordeaux, 21

Tartaric Acid—
Bordeaux, 8 cks.
Rotterdam, 3

Treacle—
New York, 1,250 brls.
Stettin, 176 cks. Brown, Geveke & Co.

Ultramarine—
Hamburg, 1 ck. 6 cs.

Varnish—
New York, 6 brls. W. A. Warren

White Lead—
Rotterdam, 13 cks. J. Matthews & Co.
" 19
Trieste, 20 brls. Minder Brs.

Wood Pulp—
Montreal, 2,250 bdls.
Rotterdam, 188 bls.
Gothenburg, 38 W. Ibbotson

Zinc Ashes—
Antwerp, 3 cks.

Zinc Oxide—
Rotterdam, 25 cks. J. Matthews & Co.

Zinc White—
Stettin, 50 cks. Morris Ashby & Co., Ld.

MANCHESTER.

Week ending July 4th.

Acetic Acid—
Rotterdam, 44 blns.

Aluminous Cake—
Rotterdam, 24 cks.

Ammonia—
Copenhagen, 5 flasks

Antimony—
Boulogne, 2 cks.

Barytes—
Antwerp, 50 bgs.

Boracic Acid—
Leghorn, 12 brls.

Chrome Acetate—
Rotterdam, 10 cks.

Colours—
Boulogne, 16 cks.
Hamburg, 9 3 cs.
Rotterdam, 43 37 20 bxs. 137 brls.
Ghent, 6 brls.
Antwerp, 4
" 2 J. T. Fletcher & Co.

Creosote Salt—
Rotterdam, 4 cks.

Dextrine—
Hamburg, 50 bgs.
Stettin, 50 Stott, Coker & Co.

Dyestuffs—
Alizarine
Rotterdam, 130 cks.
Shumac
Palermo, 50 bgs. 300 bls.

Dyestuffs *(otherwise unues.)—*
Antwerp, 2 brls.

Farina—
Hamburg, 300 bgs.
Stettin, 200 Stott, Coker & Co.
" 250 Brown, Geveke & Co.
" 260

Gelatine—
Rouen, 20 cs.

Glucose—
Rotterdam, 4 cks.
Stettin, 1,000 bgs. Stott, Coker, & Co.

Glue—
Hamburg, 6 cks.
Rotterdam 1 bl. 20 bgs.
Treport, 4 62
Rouen, 131

Lead Acetate—
Stettin, 9 cks.

Limestone—
Antwerp, 2 crts.

Litharge—
Rotterdam, 6 cks.

Logwood—
Black River, Ja., 429½ t. E. D. Milnes & Bro.
Laguna de Terminos, 345 t.
Milk River, Jam., 554 Simpson, Howden & Co.

Manganese—
Hamburg, 84 cks.

Mineral White—
Bordeaux, 200 bgs. G. G. Blackwell, Sons, & Co.

Ozokerit—
Stettin, 10 bgs. 161 blks. Stott, Coker, & Co.

Phosphate—
Rotterdam, 9 cks.

Pitch—
Hamburg, 217 brls.

Potassium Chloride—
Hamburg, 20 dms.

Rosin—
Savannah, 4,100 brls.

Sulphuric Acid—
Boulogne, 10 cs.

Sodium Acetate—
Antwerp, 3 cs.

Sodium Nitrate—
Rotterdam, 7 cks.

Starch—
Rotterdam, 30 cs.
Ghent, 40
Antwerp, 20

Sulphuric Acid—
Rotterdam, 10 dms.

Tartaric Acid—
Rotterdam, 8 cks.

Ultramarine—
Hamburg, 2 cks.

Wood Pulp—
Hamburg, 810 bls. 782 bdls.
Kallero, 2,000
Gefle, 5,215
Gothenburg, 2,612

Zinc Oxide—
Rotterdam, 50 brls.
Antwerp, 50

HULL.

Week ending July 4th.

Acids—
Rotterdam, 2 cks. W. & C. L. Ringrose
Leghorn, 15 Wilson, Sons, & Co., Ld.
Genoa, 5

Albumen—
St. Petersburg, 5 cs. Wilson, Sons, & Co., Ld.

Alizarine—
Rotterdam, 44 cks. W. & C. L. Ringrose
22 pks.

Alkali—
Hamburg, 4 cs. Bailey & Leetham

Barytes—
Antwerp, 34 cks. H. F. Pudsey
Bremen, 10 50 bgs. Greenwood & Sons
Rotterdam, 24 W. & C. L. Ringrose
" 24 Hutchinson & Son

Bone Meal—
Hamburg, 1 bg.

Castor Oil—
Antwerp, 36 brls.
Leghorn, 11 cs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Rotterdam, 6 cks. W. & C. L. Ringrose
Bremen, 1 Veltmann & Co.
Hamburg, 5 Wilson, Sons, & Co., Ld.
Dunkirk, 21 108 pks. "
New York, 3 "
" 20
Antwerp, 10 18 "

Cod Oil—
Christiansund, 5 brls Wilson, Sons, & Co, Ld.
Aalesund, 11 "
Bergen, 7 "

Colours—
Amsterdam, 2 cs. Hutchinson & Son
Stettin, 35 cks. Wilson, Sons, & Co., Ld.
Antwerp, 4 Bailey & Leetham
" 40 pks. Wilson, Sons, & Co., Ld.

Rotterdam, 30 cks. Hutchinson & Son
Hamburg, 17 cs. G. Malcolm & Son
Bremen, 2 2 Veltmann & Co.
" 14 Blundell, Spence, & Co
Rotterdam, 55 29 W. & C. L. Ringrose
100 pks.

Dextrine—
Stettin, 100 bgs. Wilson, Sons & Co., Ld.

Farina—
Ghent, 441 cs. Wilson, Sons, & Co., Ld.
Stettin, 350 bgs. "
Dunkirk, 50 "
Harlingen, 295

Glucose—
Rotterdam, 50 bgs. Hutchinson & Son
New York, 809 brls.

Glue—
Antwerp, 3 cks. Bailey & Leetham
Stettin, 7 Wilson, Sons, & Co., Ld.
Dunkirk, 21 "
Antwerp, 10 bls. "

Lead Acetate—
Stettin, 19 cks. Wilson, Sons, & Co., Ld.

Paint—
Christiania, 2 cs. Wilson, Sons, & Co., Ld.
New York, 14 "

Phosphate—
Ghent, 182 t.
Antwerp, 1 bg. Wilson, Sons, & Co., Ld.

Pitch—
Amsterdam, 26 cks. Hutchinson & Son
Hamburg, 49

Plumbago—
Leghorn, 100 bgs Wilson, Sons, & Co., Ld.

Pumice Stone—
Rotterdam, 1 cs. Hutchinson & Son
Leghorn, 15 67 pks. Wilson, Sons, & Co., Ld.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.

Soap—
New York, 1 brl. Wilson, Sons, & Co., Ld.

Sodium Nitrate—
Rotterdam, 4 cks. W. & C. L. Ringrose

Starch—
Amsterdam, 10 cs. Hutchinson & Son
Antwerp, 24 Bailey & Leetham
" 60 W. Gilyott & Co.
Bremen, 1,367 Veltmann & Co.

Stearine—
Antwerp, 63 pks. Wilson Sons, & Co., Ld.

Sulphur—
Marseilles, 50 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Hamburg, 1 brl. Wilson, Sons, & Co., Ld.
Dunkirk, 28 cks. "
New York, 250 tcs 50 bds. "

Tartar—
Naples, 21 cks Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 2 cks. W. & C. L. Ringrose
" 6 Hutchinson & Son

Treacle—
New York, 250 brls. Wilson, Sons, & Co., Ld.

Turpentine—
Libau, 52 cks.

Ultramarine—
Rotterdam, 9 cks. W. & C. L. Ringrose

Varnish—
New York, 13 pks. 5 brls.

White Lead—
Rotterdam, 71 cks. W. & C. L. Ringrose
Amsterdam, 45 Hutchinson & Son
Antwerp, 33 Bailey & Leetham
Rotterdam, 20 Hutchinson & Son

Wood Pulp—
Drontheim, 1,096 bls. Wilson, Sons, & Co., Ld.
Stettin, 56 "
Christiania, 884 "
Gothenburg, 162 pks. "
Halmstad, 67 "
Hamburg, 160 Bailey & Leetham
" 3

Zinc Oxide—
Antwerp, 5 cks. Bailey & Leetham

Zinc White—
Antwerp, 20 cks. Bailey & Leetham

GLASGOW.

Week ending July 9th.

Acetate of Lime—
Philadelphia, 729 bgs

Acetic Acid—
Rotterdam, 8 cks. J. Rankine & Son

Aniline—
Rotterdam, 1 ck. J. Rankine & Son

Aniline Colours—
Hamburg, 2 cs.

Asbestos—
Quebec, 240 bgs.

Barium Sulphate—
Antwerp, 600 bgs.

Barytes—
Rotterdam, 32 cks. J. Rankine & Son
" 44

Bromine—
Hamburg, 9 cs.

Castor Oil—
Marseilles, 576 brls. 10 cs.
Antwerp, 57 cks.

Cod Oil—
St. John's, N'fld., 173 cks. John Murray & Son

Colours—
Rotterdam, 15 cks. 2 cs. J. Rankine & Son
Antwerp, 9
Rotterdam, 49 pks.
Hamburg, 4 2

Cottonseed Oil—
Rotterdam, 6 brls. J. Rankine & Son
Baltimore, 125

Cream of Tartar—
Barcelona, 15 cks.
Tarragona, 31

Dyestuffs—
Alizarine
Rotterdam, 101 cks. J. Rankine & Son
" 52 pks.
Cutch
Rangoon, 300 bxs.
Logwood
Jamaica, 349 t. 10 c.
Madders
Amsterdam, 4 cks.
Myrabolams
Bombay, 1,292 bgs.

Farina—
Delfszyhl, 600 bgs.

Gelatine—
Hamburg, 1 cs.

Glucose—
Philadelphia, 200 brls.

Glue—
Rotterdam, 100 bgs. J. Rankine & Son

Manure—
Antwerp, 210 bgs.

Paint—
Christiania, 3 cs.

Paraffin Scale—
Philadelphia, 150 brls.

Paraffin Wax—
Rangoon, 480 bxs.

Potash—
Antwerp, 15 cks.

Potassium Nitrate—
Hamburg, 48 cks.

Potassium Phosphate—
Valencia, 20 cks.

Pyrites—
Huelva, 3,740 t. Tharsis Sulphur & Copper Co.

Rosin—
New York, 458 brls.

Sodium Nitrate—
Taltal, 1,670 t. A. Cross & Co.

Starch—
Boston, 400 sks.
Philadelphia, 100 bgs.
Baltimore, 1,100
Antwerp, 25 cs.
New York, 700
Amsterdam, 20 bxs.

Stearine—
Marseilles, 97 bgs.
Amsterdam, 61

Tallow—
Boston, 57 brls. 1 bx.
Baltimore, 100 tcs.

Treacle—
Montreal, 1 cs 1 bx.
New York, 1 pun.

Ultramarine—
Rotterdam, 2 cks. J. Rankine & Son

Varnish—
New York, 1 brl.

Waste Salt—
Hamburg, 544 cks. 558 bgs.

White Lead—
Rotterdam, 59 cks. J. Rankine & Son
Antwerp, 4

Wood Pulp—
Christiansand, 1,940 bls. W. Grant & Co.
Gefle, 3,137 Henderson, Craig & Co
Gothenburg, 200 366 pks.
Christiania, 3,895

Zinc Oxide—
Antwerp, 50 cks.

Zinc White—
Rotterdam, 150 cks. J. Rankine & Son

TYNE.

Week ending July 4th.

Aluminium—
Trondhjeim, 1 prcl.

Barium Carbonate—
Rotterdam, 234 bgs. Tyne S. S. Co

Barytes—
Antwerp, 660 bgs. Tyne S. S. Co.

Borax—
Antwerp, 1 cs. 8 cks. Tyne S. S. Co.

Castor Oil—
Antwerp, 32 brls. Tyne S. S. Co.

Colours—
Rotterdam, 19 tins 1 cs. Tyne S. S. Co.
Hamburg, 2 cks. "
Antwerp, 2 brls. "

Farina—
Hamburg, 50 bgs. Tyne S. S. Co

Glucose—
New York, 300 brls. Furness, Withy, & Co.

Glue—
Hamburg, 3 cks. Tyne S. S. Co.
Antwerp, 1 "

Limestone—
Antwerp, 10 cs. Tyne S. S. Co.

Manganese Ore—
Gothenburg, 16 brls.

Ochre—
Rouen, 140 cks. J. Brown & Co.
Antwerp, 65 bgs. Tyne S. S. Co.

Pyrites—
Huelva, 2,085 t. Scott Bros.

Soap—
Rotterdam, 7 cs. Tyne S. S. Co.

Sodium—
Hamburg, 1 ck. Tyne S. S. Co.

Starch—
Antwerp, 140 cs. Tyne S. S. Co.

Stearine—
New York, 37 brls. Furness, Withy, & Co.

Tartaric Acid—
Rotterdam, 16 cks. Tyne S. S. Co.

Varnish—
New York, 9 brls. Furness, Withy, & Co.

White Lead—
Antwerp, 20 brls. Tyne S. S. Co.

Wood Pulp—
Christiania, 1,480 bls.

GOOLE.

Period ending July 1st.

Alizarine—
Rotterdam, 22 cks. 1 cs.

Alkali—
Calais, 20 cks.

Aniline—
Amsterdam, 2 cks.
Hamburg, 1

Antimony—
Boulogne, 14 cks.

Caoutchouc—
Boulogne, 4 cks.

Chemicals *(otherwise undes.)*—
Hamburg, 1 ck. 6 cs.

Coal Products *(otherwise undes.)*—
Boulogne, 2 cks.

Coal Tar Dyes—
Rotterdam, 559 cks. 68 cs.

Colours—
Hamburg, 26 cks. 32 cs. 50 bgs.

Dyestuffs *(otherwise undescribed)*
Hamburg, 1 ck. 100 bgs.
Boulogne, 33 18 cs. 31 pks.

Farina—
Hamburg, 780 bgs.
Delfszyhl, 592
Harlingen, 50

Glucose—
Hamburg, 48 cks.
Calais, 100 bgs.

Glue—
Rotterdam, 10 bgs.
Ghent, 10 cks.

Logwood—
Hamburg, 31 pcs.
Belize, 495

Madder—
Rotterdam, 2 cks. 1 cs.

Pitch—
Rotterdam, 20 cks.

Potash—
Rotterdam, 30 cks.
Calais, 6 dms.
Dunkirk, 15 136

Pyrites—
Huelva, 2,049 t.
Mo, Sweden, 800

Saltpetre—
Rotterdam, 110 bgs.
Hamburg, 49 cks.

Soap—
Rotterdam, 3 cs.
Boulogne, 3 cks.

Starch—
Antwerp, 20 cs.
Ghent, 42

Waste Salt—
Hamburg, 763 cks. 200 t.

Wood Pulp—
Hamburg, 123 bls.

GRIMSBY.

Period ending July 4th.

Barytes—
Rotterdam, 134 bgs.

Caoutchouc—
Hamburg, 9 cs.
Antwerp 1
Rotterdam, 2

Chemicals *(otherwise undescribed)*
Rotterdam, 10 cs. 20 pks.
Hamburg, 6 cks. 6 4

Coal Products *(otherwise undes.)*—
Hamburg, 33 pks.

Colours—
Rotterdam, 1 ck.
Dieppe, 6
Antwerp, 32 19 cs. 83 pks.
Hamburg, 20 23

Dyes—
Hamburg, 36 pks.
Antwerp, 6 cks. 31

Farina—
Hamburg, 97 bgs.

Glucose—
Hamburg, 4 cks.

Soap—
Hamburg, 1 cs.

Starch—
Antwerp, 112 cs.

Zinc Ashes—
Antwerp, 9 cks.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 8th.

Acids—
Rio de Janeiro, 6 cs. £36
Cape Town, 5 kgs. 15

Alkali—
Lyttelton, 5 t. 4 c. £21
Madrid, 2 38
Montreal, 11 39

Ammonia—
Huelva, 12 c. £13

Ammonia (Liquid)—
Rotterdam, 50 drs. 75

Ammonium Carbonate—
Dunkirk, 1 t. 12 c. £45
Rotterdam, 50 pks. 164

Ammonium Chloride—
Salonica, 2 t. 2 c. £78
Amsterdam, 9 17
Constantinople, 10 brls 33
Calcutta, 3 13

Ammonium Sulphate—
Dunkirk, 12 t. £105
Bremen, 50 413
Antwerp, 100 825
Hamburg, 80 638
Sourabaya, 250 2,125

Anhydrous Ammonia—
Cologne, 131 cyldrs. £220

Arsenic—
Adelaide, 2 cs. £21
Colombo, 10 c. 13

Borax—
E. London, 80 kgs. £88
Adelaide, 1 t. 19 c. 37

Calcium Phosphide—
Calcutta, 2 cs. £16

Carbolic Acid—
S. Paulo, 150 dms. £35
New York, 20 cks. 150
Mauritius, 5 cs. 27
Treport, 20 cans 30
Rouen, 36 65
London (Ont.), 3 12
Rotterdam, 52 brls. 200

Carbonic Acid Gas—
Jersey, 50 tubes £19

Caustic Soda—
Hobart, 5 t. 6 c. £39
Lyttelton, 5 37
Melbourne, 10 3 91
Wellington, 19 19
Algoa Bay, 2 14 57
Adelaide, 25 8 182

Chemicals (*otherwise undescribed*)
Boulogne, 6 pks. £39
Calcutta, 4 c. 42
Sydney, 5 kgs. 11
Adelaide, 20 12 cs. 2 cks. 48
Madras, 1 t. 28
Melbourne, 21 15
Dunkirk, 5 200
Huelva, 24 —

Citric Acid—
Hamburg, 2 cks. 10 c. 18 kgs £223
Copenhagen, 5 32
Amsterdam, 3 19
Lisbon, 1 t. £122
Cape Town, 3 19
Brisbane, 3 cs. 20
Melbourne, 10 61

Coal Products—
Alizarine
St. Petersburg, 12 cs. £636
Lisbon, 4 67
Aniline Oil
Rotterdam, 12 drs. £450
Dunkirk, 15 560
New York, 18 670
Aniline Salts
New York, 27 cks. £200
Benzol
Rotterdam, 49 cks. £217
Coal Tar Dyes
Boston, 18 pks. £291
Naphtha
Melbourne, 20 drs. £12
Brussels, 26 cks. 75
Naphthaline
Treport, 53 cks. 90 bgs. £117
Hamburg, 47 1,815 685
Pitch
Hochfeld, 170 t. £264
Antwerp, 250 400
New York, 378 cks. 235
Boston, 250 1,500 brls. 999
Tar
Natal, 450 drs. £23
Tar and Pitch
Dunedin, 67 pks. £31
Tar Oil
Yokohama, 5 brls. £11
Trelleborg, 841 cks. 456
Toluol
Rotterdam, 49 cks. 40 runlts. £343

Coal Products (*otherwise undes.*)—
Cape Town, 12 pks. £12
Natal, 30 dms. 20 runlts. 14

Copper Sulphate—
Constantinople, 2 t. 9 c. £45
Paris, 80 1,518

Corrosive Sublimate—
Colombo, 1 cs. £22

Cream of Tartar—
Fremantle, 5 c. £36
Cape Town, 5 24
Auckland, 10 56

Disinfectants—
Penang, 5 cks. 300 drs. £155
Bahia, 1 t. 10
Paris, 15 75
Sydney, 1 cs 13 brls. 46

Hypophosphites—
New York, 11 cs. £185

Liquid Ammonia and Acids—
Pelotas, 5 pks. £26

Manure—
Trinidad, 30 t. £455
Lyttelton, 80 212
Bluff, 25 250
Wellington, 250 663
Gothenburg, 29 11 c. 60
Madeira, 50 4 370
Libau, 480 1,032

Oxalic Acid—
Harlingen, 2 t. 18 c. £90

Phosphorus—
Las Palmas, 1 c. £12

Potassium Chlorate—
B. Ayres, 1 t. 10 c. £63

Potassium Cyanide—
E. London, 5 cs. £15
Melbourne, 20 121

Potassium Prussiate—
Philadelphia, 10 cks. £182
Libau, 2 t. 66

Saltpetre—
Sydney, 5 t. £113
Gibraltar, 10 207
Flushing, 17 c. 35

Sheep Dip—
Brisbane, 150 drs 50 kgs. £350
B. Ayres, 65 t. 13 c. 50 cs 2,33[illegible]

Soda—
Algoa Bay, 6 t. 9 c. £26

Soda Alkali—
B. Ayres, 1 t. 10 c. £5
Algoa Bay, 3 23

Sodium Bicarbonate—
Christiania, 6 c. £6
Trinidad, 1 t. 8
Algoa Bay, 5 1 35
Auckland, 4 30

Sulphur—
Algoa Bay, 8 t. 19 c. £98
Mossel Bay, 13 8 146

Sulphuric Acid—
Algoa Bay, 4 t. 10 c. £39
Penang, 10 cs. 10

Superphosphates—
Bluff, 150 t. £750

Tartaric Acid—
Adelaide, 5 c. £34
Auckland, 5 33

LIVERPOOL.

Week ending July 8th.

Acetic Acid—
Lisbon, 13 c. 2 q. £8

Albumen—
Hamburg, 5 c. £20

Alum—
Naples, 1 t 16 c. £9
Baltimore, 2 10
Ancona, 2 10 12
Melbourne Bay, 2 12 12
Montreal, 7 17 3 q. 38
Beyrout, 5 23
Bahia, 1 4 6
Smyrna, 4 10 3 25
Volo, 4 5 3 20
Galatz, 12 4 3 59
Patras, 1 9 1 7
Constantinople, 5 14 3 28
Ineboli, 2 17 1 14
Cape Town, 18 5

Aluminous Cake—
Melbourne, 6 t. 7 c. £25

Ammonium Carbonate—
Bourgas, 7 c. £9
Bilbao, 1 t. 28

Ammonium Chloride—
St. Petersburg, 2 t. £41
Smyrna, 6 c. 2 q. 10
Montreal, 2 19 68
Philadelphia, 7 7 3 241

Ammonium Sulphate—
Barcelona, 25 t. 15 c. £200
N. Orleans, 100 13 838
Nantes, 50 4 402
New York, 51 10 3 q. 420
Messina, 4 4 3 35
Las Palmas, 30 3 1 252
Valencia, 65 520
Palermo, 5 1 2 41

Barium Nitrate—
San Francisco, 1 t. 5 c. 2 q. £25

Barium Sulphate—
San Francisco, 5 t. 12 c. 1 q. £7

Bleaching Powder—
Alexandria, 3 cks.
Baltimore, 58
Boston, 274
Genoa, 69
Hamburg, 2
Montreal, 19 cs. 51 pks.
Nantes, 72
Naples, 20
New Fairwater, 34
New York, 325
Philadelphia, 19
Rotterdam, 16
San Sebastian, 28 dms.
Cape Town, 1 t. £16

Boracic Acid—
Rotterdam, 1 t. £22

Borax—
Kobe, 3 t. 11 c. 2 q. £70
Fiume, 1 20
Havre, 5 5 105
Montreal, 2 12 1 55
Yokohama, 2 19 2 60
Antwerp, 7 1 2 137
Rotterdam, 4 8 2 87
Cadiz, 1 1 20
Riga, 5 2 93
Patras, 5 3 q. 6
Melbourne, 1 19
Rigo, 5 3 6
Hiogo, 3 8 3 63
Hamburg, 33 9 2 669

Calcium Chloride—
M. Video, 2 t. 7 c. £8
Rangoon, 3 7

Carbolic Acid—
Santander, 4 c. £14
Odessa, 2 t. 5 1 q. 56
Rotterdam, 11 531
New York, 7 cs. 60
Genoa, 1 4 2 78
Melbourne, 50 kgs. 45
Lisbon, 2 19
Hamburg, 3 2 19

Caustic Soda—
Alexandria, 9 dms.
Bahia, 35
Baltimore, 120
Batavia, 25
Bilbao, 100
Brisbane, 3
Boston, 25 100 brls.
Calcutta, 20
Catania, 20
Corfu, 30
Fairwater, 120
Galatz, 95
Genoa, 50
Haifa, 6
Hamburg, 7
Hong Kong, 9
Ibrail, 70
La Guayra, 10
Libau, 70
Manila, 50
Maracaibo, 10
Melbourne 15
Messina, 35
M. Video, 200
Montreal, 15 pks.
Naples, 16
New York, 465
Penang, 18
Rangoon, 38
Riga, 386
Rotterdam, 56
Salaverry, 10
Samarang, 57
Santander, 100
Seville, 161
Singapore, 32
Stettin, 4
Talcahuano, 45
Tampico, 777
Valencia, 37
Valparaiso, 100
Vera Cruz, 159
Volo, 10
Yokohama, 80

Chemicals (*otherwise undescribed*)
Curacao, 1 c. 2 q. £5
Montreal, 50 brls. 36
Calcutta, 10 t. 9 3 35
Stettin, 1 19 69
Naples, 1 35
Oporto, 5 9
Philadelphia, 13 15 452
Constantinople, 2 10 87

China Clay—
Boston, 1,616 cks.
Lisbon, 75 bgs.
Montreal, 400 36 crts.
Pernambuco, 200
Rio de Janeiro, 40
Trieste, 200
Vera Cruz, 100

Chrome Acetate—
Santos, 5 c. £12

Citric Acid—
St. Petersburg, 1 t. 5 c. £145

Coal Products—
Aniline Colours
Philadelphia, 1 ck.
Aniline Oil
Barcelona, 3 cks.
Philadelphia, 7 dms.
Aniline Salt
Bombay, 10 cs.
Boston, 20
New York, 29 cks.
Santos, 10
Creosote Oil
Bordeaux, 230 brls.
Naphthaline
Antwerp, 140 bgs.
Tar
Boston, 1 kg.
Cabedello, 10 brls.
Galatz, 30
Pernambuco, 10
Vigo, 40

Cobalt Oxide—
New York, 12 t. 10 c. £278

Copper Sulphate—
Constantinople, 6 t. £108
Cabedello, 10 c. 1 q. 11
Trieste, 14 15 3 244
New York, 30 547
Riga, 1 19 3 35
Danzig, 4 19 85
Lille, 5 2 1 91
Pernambuco, 10 10
Naples, 5 37 185

Piræus, 38 2 17
Clarente, 15 2 3 360
Nantes, 143 35 2,539
Bordeaux, 202 4 3,581
Paris, 30 2 2 524
Genoa, 9 5 1 173
Cette, 35 3 6 630
Venice, 10 4 2 169

Copperas –
Varna, 2 t. 4 c. 2 q. £3

Cream of Tartar—
Montreal, 2 t. £132

Disinfectants—
Hong Kong, 1 t. 2 c. 2 q. £15
Bombay, 1 5 7

Extracts—
Montreal, 1 t. £39

Gelatine—
New York, 230 bxs.

Iron Oxide—
B. Ayres, 45 t. 2 c. 2 q. £100
Philadelphia, 6 1 95
Montreal, 2 12 15

Lime—
Accra, 2 t. 19 c. £12

Magnesium Chlorate—
St. Petersburg, 10 t. 4 c. £25

Magnesium Chloride—
Bombay, 25 t. £62

Magnesium Sulphate
Rio de Janeiro, 150 kgs.
Tunis, 60

Manure—
St. Nazaire, 120 t. £402
Las Palmas, 3 10 c. 7
Teneriffe, 12 10 105

Metallic Sodium—
Rotterdam, 3 t. 7 c. 2 q. £302

Muriatic Acid—
B. Ayres, 1 t. 12 c. 1 q. £24

Nickel Salts—
B. Ayres, 2 c £10

Nitric Acid—
B. Ayres, 4 c. £4

Ochre—
Antwerp, 24 bgs.

Oxalic Acid—
Boston, 6 t. 15 c. £209

Paint—
Adelaide, 20 dms.
B. Ayres, 14 cks. 30
Cadiz, 4 kgs.
Cape Coast, 3 brls. 50
Cabedello, 5 cs.
Calcutta, 754
Cape Town, 3
Cartagena, 1 brl. 1
Corfu, 3 40
E. London, 10 80 34
Genoa, 4 pks.
Gibraltar, 8
Guayaquil, 45 bgs.
Hamburg, 2 130
Havana, 155
Hong Kong, 8
Lagos, 8
La Libertad, 10
Lisbon, 3 130 dms.
Manaos, 15 2 cs.
Manila, 58 3
M. Video, 9
Montreal, 8
New York, 1 9
Old Calabar, 4 8 brls.
Rio de Janeiro, 100 25
St. John, N'fld., 206
San Francisco, 4
Singapore, 2
Tripoli, 62 cs.
Valparaiso,

Painters' Colours—
Akassa, 18 kgs. 1 cs.
Beyrout, 15 cks.
Bremen, 300 bgs.
B. Ayres, 26 brls. 73 2 92
N. York, 200 45 4
Para, 14 11 tcs.
Pernambuco, 120
Philadelphia, 36 70 bgs. 70 backs
Piræus, 5
Port Said, 8 1 dm.
Rotterdam, 10 704
St. John's, N'fld., 3 130 kgs.
Santos, 3 cs.
Stettin, 10
Valparaiso, 52

Paraffin Scale—
Hamburg, 3 cs.

Paraffin Wax—
Basl, 60 bgs.
Naples, 40
Pernambuco, 10 cs.

Phosphorus—
Hiogo, 1 t. 18 c. £390
Calcutta, 1 10
Vera Cruz, 5 55
Shanghai, 18 180

Picric Acid—
New York, 1 t. £95

Potassium—
Barcelona, 1½ q £51

Potassium Bichromate—
Vera Cruz, 1 t. 1 c. £50
Oporto, 7 15

Potassium Carbonate –
Constantinople, 15 t. 17 c. £340

Potassium Chlorate—
Hamburg, 15 c. £29
Genoa, 8 15
Konigsberg, 15 30
Rotterdam, 1 t. 39
Gutujewski, 6 10 316
New York, 1 5 48
Stettin, 10 396
Randers, 1 39
Riga, 7 9 289
Philadelphia, 10 478
St. Petersburg, 16 10 647

Potassium Cyanide—
Curacao, 10 c. £70

Potassium Prussiate—
Barcelona, 1 t. £58

Salt –
Antwerp. 245 t.
Barcelona, 50
Belize. 138
Boston, 380
B. Ayres, 166 1 c.
Calcutta, 3,062
Drewin, 6
E. London, 8 18
Ghent, 200
Grand Bassa, 5
Halifax, 150
Lagos, 102
Manaos, 30
Melbourne, 25
M. Video, 5
Montreal, 1,322
N'wc'tle, NSW, 605
N. Orleans, 4 10
Newport News, 100
Oporto, 10
Para, 100
Port Natal, 23
Porto Novo, 50
Rio del Rey, 9 7
Sierra Leone, 30
Sydney, 225
Valparaiso, 100
Victoria, 11 10

Salt Cake—
Baltimore, 60 t. 2 c. £66
Antwerp, 85 10 118
Genoa, 25 2 46

Saltpetre—
Vera Cruz, 15 c. £18
Para, 10 18
San Francisco, 1 t. 19 1 q. 45

Sheep Dip –
B. Ayres, 8 t. 18 c. 2 q. £850
Pt. Natal, 7 35
M. Video, 13 4 3 314
Calcutta, 16 1 85
Algoa Bay, 12 1 16
Valparaiso, 3 1 8

Soap—
Accra, 40 bxs.
Acajutla, 1 cs.
Addah, 20
Alexandria, 95
Algoa Bay, 150 brls.
Antigua, 100 51 bdls.
Antwerp, 200 1,824 cs.
Appam, 200
Assinee, 50
Barbadoes, 305 3
Belize, 250
Bombay, 720 54
Bordeaux, 1
B. Ayres, 1
Cape Coast, 200
Calcutta, 57
Cameroons, 200 150
Callao, 120 kgs.
Cape Town, 650 550
Cartagena, 2
Curacao, 125
E. London, 1,170
Genoa, 200
Gibraltar, 801 90
Grand Lahou, 40
Havre, 230
Hamilton, 2
Hong Kong, 609
Kingston, 2,275
Lagos, 30
Lisbon, 10
Madras, 5
Malta, 301
Manaos, 20
Melilla, 50
Monrovia, 28
Mossel Bay, 1,000
New York, 325 82
Opobo, 168
Paris, 10
Patras, 100
Penang, 200
Piræus, 54
Pt. Natal, 874 965
Rotterdam, 410
St. John's, N'fd. 524 20
St Lucia, 140
St. Nazaire, 1
Shanghai, 4,000
Sierra Leone, 50
Singapore, 1,550 32
Teneriffe, 260
Trinidad, 1,870
Valparaiso, 21
Vera Cruz, 82 2 bdls.
Winnebah, 80

Soda Alkali—
Antwerp, 20 brls.

Soda Ash—
Adelaide, 53 cks.
Antwerp, 200 bgs.
Bahia, 20 brls.
Baltimore, 15
Barcelona, 48
Boston, 35 42 tcs. 365
B. Ayres, 75 brls.
Callao, 15
Copenhagen, 21
Ghent, 50
Hamburg, 35 10
Hong Kong, 38
Konigsberg, 20
Libau 180
M. Video, 50 50
Montreal, 100
New Fairwater, 18
N. Orleans, 22
New York, 188 tcs. 2,250
Philadelphia, 186
Piræus, 3 cks.
Riga, 28
Rio de Janeiro, 50 130 brls.
St. Petersburg, 9 28
Samarang, 43
San Francisco, 52
Smyrna, 150 kgs.
Sourabaya, 10
Sydney, 4 8

Soda Crystals—
Alexandria, 40 brls.
Batavia, 50 cks.
Boston, 196
Montreal, 132 pks.
N. Orleans, 140 kgs.
Para, 20
Philadelphia, 420 374

Sodium—
Barcelona, 1 q. £4

Sodium Acetate—
Vera Cruz, 4 cks.

Sodium Bicarbonate—
Alexandria, 50 kgs.
Antwerp, 115 4 cks.
Barcelona, 100
Bordeaux, 165
B. Ayres, 25 105
Calcutta, 1,000
Christiania, 65
Colombo, 4
Danzig, 25
Fairwater, 20
Galatz, 20
Genoa, 170 38
Hamburg, 20
Havana, 20
Hong Kong, 30
Konigsberg. 100
Malaga, 50
Marseilles, 7
Melbourne, 40 10 bgs.
Montreal, 65 5 30
Nantes, 7 7
Naples, 10 2
New Fairwater, 164 dms.
Newport News, 150
Odessa, 100
Paris, 95
Riga, 1,071 bgs.
Rosario, 50
Seville, 100
Singapore, 20
Smyrna, 10
Stettin, 55 49
Sydney, 280 10
Trieste, 70
Valencia, 75 2
Valparaiso, 100

Sodium Bichromate—
N. Orleans, 5 cks.
Oporto, 8

Sodium Chlorate—
Boston, 75 kgs.
Danzig, 60
Hamburg, 10 4 cks.
St. Petersburg, 150

Sodium Hyposulphite –
Constantinople, 30 kgs.

Sodium Silicate—
Bilbao, 35 brls.
Calcutta, 15 cks.
Funchal, 5
Ibrail, 6 dms.
La Guayra, 6
Lisbon, 8
Melbourne, 15
Monaster, 10
Montreal, 25
Oporto, 22
Piræus, 10
Progresso, 10
Salonica, 10
San Sebastian, 32
Santander, 32
Smyrna, 35
Tarragona, 20
Trinidad, 4
Wellington, 19

Sodium Sulphate—
Constantinople, 40 cks.
Montreal, 20
San Francisco, 75

Starch—
St John's, N'fd., 60 cs.
Zante, 20

Sulphur—
Miramichi, 300 t. £1,
Boston, 300 6 c. 9
Callao, 1 4
Sulphuric Acid —
B. Ayres, 7 c.
Superphosphates—
Rio de Janeiro, 10 t. 1 c.
Nantes, 139 10 3 q. 3
Las Palmas, 20
Tartaric Acid—
Rio de Janeiro, 6 c. 3 q.
Yarnish—
B. Ayres, 2 cs.
Cabedello, 25 dms.
Hong Kong, 20
Lagos, 4
Lisbon, 48
White Lead—
Cape Town, 242 kgs.
Zinc Chlorate—
Bombay, 1 t. 4 c. 3 q.

MANCHESTER

Week ending July 8th.

Alum—
Bombay, 35 brls.
Beyrout, 21
Tripoli, B., 14 hf.-tcs.

Ammonia—
Bombay, 4 cks.

Aniline Colours—
Rotterdam, 1 cs. 1 kg.

Aniline Oil—
Rotterdam, 2 dms. 3 tins

Borax—
Larnaca, 1 cs.

Carbolic Acid—
Rotterdam, 95 cks.

Caustic Soda—
Larnaca, 1 dm.
Sfax, 5

Chemicals *(otherwise undescribe*
Beyrout, 10 cks.

Citric Acid—
Rotterdam, 1 cs

Cottonseed Oil—
Malta, 5 brls.
Tunis, 115

Glue—
Treport, 1 ck.
Linseed Oil—
Tunis, 5 brls.
Paint—
La Goulette, 40 dms.
Paraffin Wax—
Hamburg, 20 cs.
Soap—
Malta, 1 cs.
Soda Ash—
Larnaca, 2 cks.
Sodium Bicarbonate—
Larnaca, 2 kgs.
Treport, 34
Sodium Silicate—
Sfax, 5 brls.
Starch—
Bombay, 3 cks.
Tar—
Treport, 30 brls.
Tar Salts—
Antwerp, 58 cks.
Hamburg, 50
Copenhagen, 3 56 bgs.
Rotterdam, 17
Tartaric Acid—
Rotterdam, 1 cs.
Toluol—
Rotterdam, 75 cks. 40 dms.

HULL.

Week ending July 4th.

Alkali—
Leghorn, 4 cks. 100 bgs.
Stettin, 10
Ammonium Sulphate—
Amsterdam, 509 bgs.
Dunkirk, 140
Benzol—
Amsterdam, 91 cks. 16 dms.
Bleaching Powder—
Danzig, 183 cks.
Caustic Soda—
Danzig, 3 dms.
Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck. 20 pks.
Antwerp, 4 28 cs.
Bergen, 20
Copenhagen, 4 50
Christiania, 5 20 3
Danzig, 10
Genoa, 6
Gothenburg, 5 36
Hamburg, 16 2
Konigsberg, 2 13
New York, 10 25
Rotterdam, 48 110 20
St. Petersburg, 2 25 10
Stettin, 2
Stockholm, 3
Cottonseed Oil—
Amsterdam, 520 c.
Antwerp, 806
Bremen, 361
Christiansand, 17
Christiania, 172
Hamburg, 749
Rotterdam, 492
Stettin, 351
Stockholm, 10
Creosote—
Hamburg, 5 brls.
Dyestuffs (*otherwise undescribed*)
Christiania, 30 bgs.
Genoa, 4 cks.
Hamburg, 1 cs.
Riga, 6 pks.
St. Petersburg, 20
Stettin, 66
Glue—
St. Petersburg, 1 cs.
Linseed Oil—
Amsterdam, 51 c.
Antwerp, 90
Bergen, 182
Copenhagen, 133
Christiansand, 38
Christiansund, 34
Christiania, 687
Drontheim, 289
Ghent, 3
Hamburg, 208
Manure—
Dunkirk, 10 t. 3,290 bgs.
Jersey, 854
Naphthaline—
Riga, 100 bgs.
Painters' Colours—
Amsterdam, 23 cks.
Antwerp, 54
Bremen, 3
Copenhagen, 5
Christiansand, 40 kgs.
Dunkirk, 5
Christiania, 4 1 cs.
Drontheim, 10 20 dms.
Danzig, 5 50 pks.
Ghent, 1
Genoa, 32
Gothenburg, 30 1
Hamburg, 7
Harlingen, 5
Konigsberg, 2
Marseilles, 3
Naples, 72
New York, 367 30
Rotterdam, 13 18 7 dms.
Riga, 25
St. Petersburg, 77 1 pk.
Stettin, 70 100 t.
Pitch—
Antwerp, 70 t.
New York, 246 cks.
Rotterdam, 8 t.
Soap—
Bergen, 2 cs.
Christiania, 1
Tallow—
Amsterdam, 58 cks.
Christiania, 2
Tar—
Amsterdam, 10 cks.
Copenhagen, 3
Danzig, 7
Hamburg, 10
Rotterdam, 7 2 dms.
Stettin, 1
Christiania, 1
Varnish—
Antwerp, 7 cs. 3 pks.
Ghent, 2 cks.
Genoa, 3
Gothenburg, 1
Hamburg, 3
Marseilles, 3
Naples, 8
Rotterdam, 1 dm.
Stettin, 8

GLASGOW.

Week ending July 9th.

Ammonium Sulphate—
Barbadoes, 10 t.
Antigua, 29 14 c.
Demerara, 124 15¾
Trinidad, 15 5¾
Antwerp, 51
Hamburg, 50 12
Bleaching Powder—
Calcutta, 56 t. 18 c.
Borax—
New York, 17 c.
Carbolic Acid—
Rotterdam, 5 t.
Chemicals (*otherwise undescribed*)
Christiania, £16
Coal Products—
Creosote Oil
Christiania, £14
Hamburg, 64
" 50 t. 13 c.
Creosote Salt
Antwerp, 120 t.
Naphtha
Dieppe, 14 t. 10 c.
Pitch
New York, 65 t. 7 c.
Gothenburg, £150
U.S.A., 187
Antwerp, 467 140
Canada,
Dyestuffs (*otherwise undes.*)—
Canada, £173
Montreal, 40
Extracts—
Christiania, £14
Gelatine—
New York, 5,400 lbs.
U.S.A., £251
Canada, 154
Iodine—
Rotterdam, £880
Linseed Oil—
Christiania, £24. 10s.
St. John's, N'fd., 1 t. 5½ c.
Callao, 270 gls.
Canada, 4 t. 6½
Malta, 1 15¾
Logwood—
Canada. £114
Gothenburg, 40
Manganese—
Rotterdam, 1 t. 17 c.
Paint—
B. Ayres, £27
Coronel, 125
Painters' Colours—
Durban, £82
Demerara, qty.
Trinidad, 70
U.S.A., 104
Paraffin Wax—
King William's Town, £49
Christiania, 42
Potassium Bichromate—
Genoa, £318
Leghorn, 51
Rotterdam, 21
Barcelona, 164
Sheep Dip—
B. Ayres, £203
Soap—
Barbadoes, 2 t. 6 c.
New York, 2 4
Demerara, 5 15¾
Newfoundland, 1 18
Trinidad, 9 16¾
Jamaica, 1 5
Sodium Bichromate—
Genoa, £779
Barcelona, 19 c.
Sulphur—
Demerara, £30
Sulphuric Acid—
Trinidad, £31
Tallow—
Rotterdam, 10 t. 14 c.
Treacle—
Durban, 2 t. 5 c.
Christiania, 3 17
Gothenburg, 28 3¾
Halmstad, 7 6¾
Turpentine—
Christiania, £26. 10s.

TYNE.

Week ending July 4th.

Alkali—
Venice 9 t. 8 c.
Rotterdam, 2 6
Ammonia—
Barcelona, 4 t. 16 c.
St. Petersburg, 5
Ammonium Carbonate—
Seville, 3 c.
Barcelona, 1 t.
Ammonium Sulphate—
Valencia, 63 t.
Antimony—
Rotterdam, 1 t.
Hamburg, 12 10 c.
Ergasteria, 2 q.
Montreal, 2
Barium Carbonate—
Hamburg, 157 t. 6 c.
Barytes—
Barcelona, 3 t. 8 c.
Bleaching Powder—
Venice, 5 t.
Christiania, 56 12 c.
Arendal, 1 2
Hamburg, 21 6
Antwerp, 35 9
Rotterdam, 12 13
Odense, 3 19
Copenhagen, 48
Caustic Soda—
Valencia, 20 t. 6 c.
Venice, J.Y., 33
Abo, 9
Christiania, 2 18
Hamburg, 14 10
Antwerp, 16 19
Aalborg, 4 7
Barcelona, 16 18
Copenhagen, 10 7
Montreal, 14 10
Litharge—
Christiania, 3
Arendal, 1 15 c.
Hamburg, 1 10
Copenhagen, 11
Oporto 12
Magnesia—
Hamburg, 9 c.
Barcelona, 13 t. 1
Manure—
Santos, 98 t. 13 c.
Ochre—
Christiania, 3 t. 4 c.
Oxalic Acid—
Barcelona, 4 t. 19 c.
Paint—
Helsingfors, 7 c.
Bergen, 10
Rio de Janeiro, 3 t.
Hamburg, 3
Phosphorus—
Barcelona, 1 t. 17 c.
Soda—
Venice, J.Y., 5 t. 3 c.
Christiania, 15 2
Rotterdam, 25 7
B. Ayres, 65 14
Svendborg, 51 6
Oporto, 8 13
Soda Ash—
Venice, J.Y., 8 t. 12 c.
Arendal, 10
Hamburg, 5 9
Sodium Hyposulphite—
Montreal, 3 t. 2 c.
Sodium Silicate—
Valencia, 9 t. 3 c.
Tallow—
Hamburg, 1 t. 1 c.
Tar—
Montreal, 5 t.
White Lead—
Copenhagen, 5 t. 6 c.
Oporto, 4 9
Montreal, 25 7

GOOLE.

Period ending July 1st.

Alkali—
Boulogne, 2 cks.
Ghent, 1 dm.
Amsterdam, 30
Rotterdam, 1 cs.
Benzol—
Antwerp, 69 cks.
Boulogne, 22
Rotterdam, 51
Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck.
Ghent, 2 1 cs.
Antwerp, 4
Coal Products (*otherwise undes.*)—
Antwerp, 92 cks. 1 dm.
Boulogne, 61 4 cs.
Ghent, 14
Hamburg, 25
Rotterdam, 139
Colours—
Antwerp, 4 cks.
Boulogne, 2 3 cs.
Ghent, 3
Hamburg, 5
Rotterdam, 6
Amsterdam, 3 1
Dyestuffs (*otherwise undescribed*)
Ghent, 4 cks. 1 cs.
Harlingen, 20
Manure—
Hamburg, 200 bgs.
Rotterdam, 20
Pitch—
Antwerp, 775 t.
Dunkirk, 100

GRIMSBY.

Period ending July 4th.

Alkali—
Dieppe, 1 ck.
Chemicals (*otherwise undescribed*)
Rotterdam, 39 dms.
Coal Products (*otherwise undes.*)—
Dieppe, 343 cks. 1 cs. 5 pks.
Hamburg, 27
Rotterdam, 39 15
Colours—
Antwerp, 9 cks. 5 cs.
Dieppe, 20
Rotterdam, 4
Dyestuffs (*otherwise undescribed*)
Dieppe, 2 cks.

PRICES CURRENT.

WEDNESDAY, July 15th, 1896.

Prepared by Messrs. Higginbottom and Co., 116, Portland Street, Manchester.

The values stated are f.o.r. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. ..per cwt.	5	9 &	8 9
,, Glacial .. .. ,,		40/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2¾
Tartaric .. .. ,,	0	1	3
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &	35/-	
,, Nitrate .. .. per ton	37	10	0
,, Phosphate .. .. per lb.	0	0	5¼
,, Sulphate (grey) London .. .. per ton	8	0	0
,, ,, (grey) Hull .. .. ,,	8	0	0
Aniline Oil (pure) .. .. per lb.	0	0	8½
Aniline Salt ,, ... ,,	0	0	8
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	3	1
,, 50/90 ,, ... ,,	0	2	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7¼
,, (crude 60°) .. .. per gallon	0	2	3
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	10
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	4
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	49	10	0
,, Sulphate .. .. ,,	16	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	7	6
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	5	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	10	0
,, ,, brown ,,) .. .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	19	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	2	6
,, ,, (grey) (ex ship .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	15	0
,, Ore, 70 % .. .. per ton	3	15	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	11
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	11
Oils:—			
Cotton-seed .. .. per ton	16	10	0
Linseed .. .. ,,	19	10	0
Petroleum, American .. .. per gallon	0	0	6½
Stearine .. .. per ton	21	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. ..nett per lb.	0	0	4¾
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	5	0
,, Chlorate .. .. per lb.	0	0	4½
,, Cyanide, 98% .. .. ,,	0	1	1½
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	15	0
,, Prussiate Yellow .. .. per lb.	0	0	7
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	7½
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	15	0
,, ,, (Soda Crystals) .. .. .. ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5¾
,, Borate (Borax) .. .. net, per ton.	20	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	7	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	7	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	10	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. ..per cwt.	0	7	10½
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	15	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	2	6
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6¾
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	7
Sulphur (Flowers) .. .. per ton.	6	5	0
,, (Roll Brimstone) .. .. ,,	5	10	0
,, Brimstone: Best Quality .. .. .. ,,	3	17	6
Superphosphate of Lime (26% .. .. ,,	2	17	6
Tallow .. .. ,,	19	0	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	65	0	0
Zinc (Spelter) .. .. ,,	17	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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CURRENT TOPICS.

SOAP DEBENTURES.

DURING this week a well-known firm has, so to speak, come out of its shell and invited the public to take up £150,000. four and a half per cent. debentures. Seeing that they are secured by a first mortgage on the whole of the freehold and leasehold properties of Messrs. Joseph Crosfield and Sons, Limited, coupled with a first charge on all their other assets, the investment would appear to be a decidedly sound one. The works as a whole have been valued at £179,792., exclusive of goodwill, while the net profits for the last two years have been certified as being more than four times the amount required to pay the interest on the debentures. The position of the works is certainly very advantageous in many ways. The business has at the same time been converted into a limited concern with a capital of £300,000, but the whole of this capital has been taken up by the members of the Crosfield family.

The success of the business is not dependent upon that greatly competition-cut commodity, soap, however. Though perhaps their "Perfection" and "Erasmic" soaps have gained for the firm the widest reputation as household and toilet soaps, while amongst colonials, who are very conservative in the matter of soap, the old-fashioned pale and blue mottled bar soaps command an extensive sale in South Africa and other foreign markets, still, the firm have undoubtedly a trusty ally in the purely chemical section of their business. Not only soap manufacturers, they have aimed at preparing for other soapmakers the chemicals they most need in their trade, and, in consequence, have developed into large manufacturers of caustic soda and silicate of soda, the two most important chemicals used in the production of soap. They are also large manufacturers of chemically pure glycerine. The demand for their soaps and chemicals is such that their present plant is quite inadequate to meet it, and further extensive additions are now necessary. The present issue has been made for the purpose of providing the capital required.

THE ALUMINIUM CO., LTD.

Though the title of this company has been rather misleading for some time past, it will be interesting to all who have followed this company through its varied and lengthy vicissitudes to learn that at last it is getting into safe waters, and being caught by the "trade winds." The prosperity, of which we have an earnest in the dividend of 15 per cent. the directors have been enabled to declare this year on the "A" shares, is not to be attributed to the metal of the century however. The sodium which enabled the company at first to make aluminium at a comparatively low price has, seemingly, done more to help than the metal to which it was in reality a retainer.

It is to be noted that the £12,000. of 10 per cent. "B" debentures have been paid off during the year, and the 6 per cent. debentures that are outstanding are about to be wiped out by a process of substitution, their place being taken by £90,000. 4½ per cent. stock.

In conjunction with these improved prospects, due cognisance must be taken of the possibilities of the latest development on which the company has embarked. We need hardly explain that we refer to the prominent part the company has played in the exploitation of the Castner-Kellner electrolytic patents. If this departure is as successful as it promises to be, it is probable that the dark days will be over, and we think it would be hard to find many who would begrudge the long-suffering shareholders their hard earned meed of recompense.

RETROSPECTIVE.

The report of Messrs. Palmer & Co., of candle repute, somehow carries us back to the solid paraffin and candle combine which was to do much, and did it——but not for the British wax and candle industries. It "did for" them in quite another way. It was a sorry bargain, and how greatly so can be partly seen from the way Messrs. Palmer & Co. saddle so much of the blame for an indifferent year's trading on the failure of the combine. Under such circumstances it is hard to think how nicely the whole thing panned out for the douce-tongued but crafty magnates of the S O. It is worse than useless to grieve about spilt milk, as it only irritates, and tends to subvert the spirit of recuperation Still, it is hard to refrain from emphasising the magnitude of the price we have to pay for such experience, and pointing out how often we have purchased lately. It surely is excusable to ask "who shall teach us wisdom?"

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Sulphate Glass. K. W. R. Goerisch. 14,901. July 6.
Manufacture of Briquette Fuel. A. Zendroni. 14,936. July 6.
Removing Hydrogen Sulphide from Gases. H. Strache. 14,934. July 6.
Explosives. S. V. Dardier. 14,950. July 6.
Evaporation Brine and other Solutions. E. J. Duff and J. Brock. 14,951. July 6.
Multiple Effect Evaporators. T Glover and J. Brock. 14,952. July 6.
Manufacture of Water Glass and Bye-products. H. Propfe. 14,953. July 6.
Manufacture of White Lead. A. B. Browne. 14,988. July 7.
Explosives. G. B. Ellis. 15,022. July 7.
Separating Oil from its Volatile Solvent. G. C. Dymond. 15,050. July 7.
Extracting Gold and Platinum from their Ores L. de Rigaud. 15,056. July 7.
Electrolytic Apparatus. F. W. Golby. 15,129. July 8.
Extracting Copper from Sulphide Ores. C. James 14,159. July 8.
Leather and Indiarubber Substitute. T. Worth, J. Foster, and H. C. P. Graves. 15,165. July 8.
Treating Sewage and other Sludge. H. W. Kearns. 15,208. July 9.
Aluminium Casks. W. R. Taylor. 15,278. July 9.
Treating Fat or Fatty Waste. T. Cond. 15,336. July 10.
Producing Ozone. E. Mann. 15,338. July 10.
Oxygen from the Atmosphere. W. A Tilden. 15,343. July 10.
Explosives. A. F. Hargreaves. 15,531. July 10.
Sewage Separator and Filter. W H. Fewkes. 15,396. July 11.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Method of and Machines for Degreasing Leather G. E. Wright, Wollaton, Nottingham, and W. Monk, 428, Alfreton-road Nottingham. Eng. Pat. 10,752. May 19, 1896.

The machines employed in the various improved processes are fairly simple in mechanism, but the nine drawings must be consulted for particulars. The main advantages which they aim at achieving in number. In the first place a warm instead of a cold liquid is used, while the skins under treatment are immersed in the and agitated therein, instead of being sprayed only as heretofore formation of patches and streaks is thus avoided. Then the sk dried by the circulation of hot air maintained at an even tempe so as to prevent any danger of scorching or uneven drying. the hot air employed is heated specially, and so is not lade vapour as is the case when hot air circulating through the evap pan is utilised.

Improvements in Scrubber Washers for Removing Impurities fr H. Kirkham, 11, Queen Victoria-street, London, E.C. Eng. Pat May 19, 1896.

Instead of the plates usually employed in revolving scrubber w a number of cages or baskets are fixed on radial arms. These are removable so that the scrubbing material can be changed bottom half of the scrubber jacket is filled with water, so tha baskets revolve on the central shaft they are repeatedly wetted a sented to the current of gas to be purified. There are five figu

---

Improvements in the Production of Calcium Carbide. T. L. Plaza Hotel, Fifth-avenue, Fifty-ninth-street, New York, U.S.A. 15,360. August 15, 1895 (date under Internat. Convent, January 16, 1

The patentee claims that the process of manufacture is purely smelting, and the formation of the carbide is not due to any electrolytic action. Very finely ground and carefully mixed li coke in the proportion of 65 % to 35 % are fed into a cone furnace, and fused in an electric arc formed by the aid of an alt current from a dynamo of suitable voltage and amperage suffi the capacity of the furnace The central carbon pole is adjust that as the carbide forms at the bottom of the furnace the pole gradually raised, and a fresh portion acted on. The calcium itself is a good conductor of electricity.

Improvements in and Apparatus for the Manufacture or Produ Nitric Acid. C. Dreyfus, Clayton, near Manchester. Eng. Pa July 19, 1895.

Nitrate of soda and sulphuric acid are distilled *in vacuo*. T what is practically the theoretical yield, it is necessary to regu temperature so that it eventually reaches 170° to 190° C, a temperatures impurities do not distil over with the nitric aci gases are passed through a series of absorbers and coolers befor ing the exhauster, so that the latter is protected from injury by gases. Thus the gases from the decomposing pot pass into a and then through a cooling coil. From this they travel to o ceivers and again pass a cooling coil to escape into a series of six bottles alternately with and without a charge of liquid. In this second bottle contains strong vitriol to absorb any nitrous fu may have escaped decomposition, the fourth is charged wit and the sixth with caustic soda. The gases then pass up a tow with coke, and wetted with an alkaline solution. The exha coupled to the exit pipe from this last tower. All the coolers a densers are fitted with taps, so that the products can be drawn

---

Improvements in and Apparatus for the Manufacture or Produ Hydrochloric Acid. C. Dreyfus, Clayton, near Manchester. 13,827. July 19, 1895.

This patent is substantially the same as the foregoing, save t is substituted for nitrate of soda, and the temperature in the posing pot is raised to 260°C. The passage of the gases is th but the Woulff's bottles are all charged with water, and an ad tower is interposed between the last tower and the exhauster. T most tower is packed with coke over which water is spray lattermost tower is also coke packed and wetted with caust solution, or any other suitable absorbent.

A Process for the Production of Double Aluminium Sulphi sulphurets) with Alkaline Metals, or Metals of (the na Alkaline Earths. D. Péniakoff, Rue Baudiun, Pierre Huy, Belgiu Pat. 6 290. March 21, 1896 (date under Internat. Convent. October 23,

Aluminates chosen on thermo-chemical grounds are decompo carbon bisulphide or sulphur vapours to form sulphides, and eve obtain metallic aluminium. The aluminate used is preferably ob by treating a mixture of bauxite, alkaline sulphate, and pyrites resulting aluminate is mixed with tar and calcined until the m becomes porous. It is is then broken up and exposed to C S vapours in an air-tight space. The resulting product can be con into aluminium either by means of reducing gases, or by electrol

THE VALUE OF LEATHER REFUSE.

(*Concluded from page 37*).

EXPERIMENT B.

In this experiment, made in 1895, a soil was selected even poorer in nitrogen than the one used in Experiment A. The object of this experiment was to see if more leather—than the amount used in the previous experiment—could not be added to the same quantity of stronger sulphuric acid, and thus secure a fertiliser testing higher in nitrogen. Dissolved leather II. was therefore prepared by adding sixty grams of fine ground sole leather to 120 grams of 60° B. sulphuric acid heated to 200° F. The black pasty mass was allowed to stand for one half-hour, and was then dried off with calcium carbonate.

Dissolved leather III. was prepared by adding 100 grams fine sole leather to 120 grams of 60° B. sulphuric acid. This amount of leather and acid—nearly one to one—furnish a very thick paste. It was dried off with calcium carbonate. The two dissolved leathers contained the following percentages of nitrogen :—

	Per cent.
Dissolved leather II.	1·13
,, ,, III.	1·75

The composition of the sulphate of potash and magnesia and of the double superphosphate, as well as the quantity applied, was the same as in Experiment A for 1895. The method of filling the pots, planting, and harvesting was also similar.

Tables III. and IV. express the results in a similar way as Tables I. and II. The sodium nitrate pots produced rather less grain than those to which the dissolved leather was applied. This tendency was noted in Experiment A. The three-tenths gram of nitrogen in the form of dissolved leather II. produced about nine-tenths as much dry matter as did a like quantity of nitrogen in the form of sodium nitrate. The percentage of nitrogen in the dissolved leather plants is noticeably less, however. The six-tenths gram of nitrogen from both the sodium nitrate and dissolved leather did not produce proportionately as much dry matter as did three-tenths gram, thus indicating that the plant was not able to work it all over into organic matter.

The three-tenths gram of nitrogen from dissolved leather III. produced rather more dry matter than did the same quantity of nitrogen from sodium nitrate. The percentage of nitrogen in the straw and grain was decidedly less, however.

Table IV. shows that the oat plants were able to get but 65% as much nitrogen from dissolved leather II. and III. as from sodium nitrate. This confirms the results obtained in Experiment A for 1894. The oat plants secured twice as much nitrogen from the six-tenths gram as from the three-tenth grams in case of the sodium nitrate and both dissolved leathers, showing that the nitrogen was fully utilised.

GENERAL CONCLUSIONS.

The above experiments, part of which cover two years, make clear that dissolved leather, when properly prepared, yields as available a source of nitrogen as the average animal matter used for fertilising purposes.

The quantity of nitrogen obtained by the plants from sodium nitrate being represented as equal to 100, the quantity obtained from dissolved leather during two years has been shown to be equal to 70.

In this connection I beg leave to add the results of the availability of the various sources of nitrogen as determined by P. Wagner. Sodium nitrate is taken as 100 in value, and the value of other sources are compared with it.

Sodium nitrate	100
Ammonium sulphate	90
Dried blood, ground horn, and green plants	70
Ground bone, ground fish, and flesh	60
Stable manure	45
Ground wool	30
Ground leather	20

TABLE III.

	Quantity of nitrogen to each pot.	Dry matter yielded by single pots.		Average dry matter from two pots.		Gain in dry matter over soil nitrogen pots on basis of 0·3 grams nitrogen applied.		If gain in dry matter with sodium nitrate = 100, then other sources of nitrogen equal to :		Average Straw and Grain.
	Grams.	Straw. Grams.	Grain. Grams.	Straw. Grams.	Grain. Grams.	Straw. Grams.	Grain. Grams.	Straw. Grams.	Grain. Grams.	Grams.
Soil nitrogen	0·000	3·146	0·296	3·706	0·426	—	—	—	—	—
	0·000	4·266	0·557							
Sodium nitrate	0·300	12·104	3·057	12·695	3·807	8·989	3·381	100·00	100·00	100·00
	0·300	13·286	4·557							
Dissolved leather II.	0·300	11·122	4·417	11·122	4·117	7·416	3·691	82·5	109·00	89·8
	0·300									
Sodium nitrate	0·600	15·628	3·014	16·836	3·742	6·565	1·658	73·00	49·00	60·5
	0·600	18·044	4·470							
Dissolved leather II.	0·600	18·582	6·646	17·344	6·612	6·819	3·093	75·9	91·5	80·1
	0·600	16·107	6·578							
Dissolved leather III.	0·300	12·976	4·879	12·664	4·880	8·958	4·454	99·6	131·8	108·4
	0·300	12·352	4·882							

TABLE IV.

	Quantity of nitrogen to each pot.	Nitrogen yielded in total dry matter.	Nitrogen in 100 grams of dry matter.		For every 100 parts of nitrogen applied, there has been returned in straw as grain :	When sodium nitrate = 100 other sources of nitrogen equal to :	For every gram of nitrogen applied there has been produced in dry matter :			For every 100 parts straw there has been produced in grain :
	Grams.	Grams.	Straw. Grams.	Grain. Grams.			Straw. Grams.	Grain. Grams.	Straw and Grain Grams.	
Soil nitrogen	0·000	0·041	0·82	2·52	—	—	—	—	—	11·5
Sodium nitrate	0·300	0·235	0·96	2·98	65·00	100·00	29·96	11·27	41·23	37·6
Dissolved leather II.	0·300	0·165	0·66	2·06	41·00	63·1	24·72	13·30	38·02	49·8
Sodium nitrate	0·600	0·412	1·78	3·01	62·00	95·4	21·90	5·53	27·43	25·3
Dissolved leather II.	0·600	0·305	0·83	2·43	42·00	65·0	22·73	10·31	33·04	45·4
Dissolved leather III.	0·300	0·170	0·60	1·92	43·00	66·0	29·86	14·85	44·71	49·7

Parliamentary Jottings.

THE DANGERS OF WOOL SORTING.

MR. J. F FLANNERY asked the Home Secretary whether, in framing rules to regulate wool sorting and in determining the kind of wool for which special precautions would be taken, the Home Office would adopt the rules, or some modification thereof, issued by the Bradford Town Council, which were generally accepted throughout the trade applying to dangerous classes of wool; and whether he would give full opportunity of conference with representatives of those concerned before rules were finally determined.

Sir M White Ridley: The special rules which have been suggested by the Dangerous Trades Committee, and which I propose to adopt, are based on the Bradford regulations, with some modifications and additions The rules will apply, like the Bradford regulations, to all kinds of wool in so far as they require that all bales shall be opened by skilled persons, but in other respects they will apply to those kinds only that are dangerous. When they are issued there will be ample opportunity for both offering and considering objections, but in view of the general acceptance for many years past of the Bradford regulations, and of the desire which has been expressed that they should be given the force of special rules, I hope that no serious opposition will be encountered.

Reports of Companies.

THE ALUMINIUM COMPANY, LIMITED.

In submitting the reports and accounts for the twelve months ended June 30th the directors have to announce that the general business of the company at Oldbury, and the various undertakings in which the company are interested, are progressing satisfactorily. The accounts show a profit of £50,681 for the financial year. After providing for debenture interest, amounting to £6,738 and other fixed charges, there remains a balance of £38,003., which, with the sum of £2,076. brought forward from last year, leaves the net profit at £40,079. The directors recommend the payment of a dividend of 15 per cent. on the "A" shares, which will absorb £9,000, that £10,000. shall be written off the works and £10,000. off the patents, leaving the sum of £11, 79. 14s. 3d. to be carried forward. It will be seen from the accounts that £10,000 has already been deducted from the amount at which the patents stood in the books of the company. This represents the value of a portion of a patent which was included in the assets of the company in the last balance-sheet, and has since been sold. Thirty-three thousand five hundred and twenty-three pounds out of the net profits for the year arises from the cash profit made on the sale of patents, &c. which were included among the assets of the company at a nominal figure. During the year the £1[illegible] per cent "B" debentures, amounting to £12,000., have been paid off, and it is intended to pay off the issue of £100,000. six per cent. debentures on October 1st, and issue in their place £90,000 four-and-a-quarter per cent. first mortgage debenture stock. The debenture debt will then be reduced by £21,800., saving an annual interest payment of £3,363. The contract with the Castner-Kellner Alkali Company, referred to in the last report, was duly completed, and the shares in that company held by this company have been placed to reserve, and will, it is expected, in the near future, add very materially to the company's annual profits The provisional contract of sale with the Mathieson Alkali Company at Niagara Falls, has been completed and after January 1st the profits of this company will further be increased by a royalty fixed at a minimum of £4,000 per annum The American company, which was mentioned in the last report, was duly incorporated under the title of the Niagara Electro-Chemical Company, and are also erecting works at the Niagara Falls It is expected these works will be completed in the course of the ensuing month Negotiations for the sale of the British and Continental rights under similar patents to those sold to the Niagara Electro-Chemical Company are now proceeding.

THE BRITISH ALUMINIUM CO., LTD.

The first ordinary general meeting of the shareholders of this company was held on Thursday last week at the Westminster Palace Hotel. Mr. R. B. Wallace, Q.C., who presided, remarked that within the short time of twelve months from the date when the works were begun aluminium had been produced in their factory. They were the only company in Great Britain manufacturing aluminium The four other places where it is made being Neuhausen in Switzerland, Froges and La Praz in France, and at the Niagara Fall in America. In 1885 aluminium was sold at about 60s per lb., but it was now sold at less than 1s 4d per lb This had been brought about by the introduction of electrical processes, especially that known as the Newhausen, which was the process they had adopted. In connection with the estab[illegible]ment of the factory at Foyers they had purchased not only the w[illegible] rights on the Foyers estate and adjacent properties, but also the [illegible] hold estate of Foyers, which extended over 8,000 acres The water continued to go over the falls, and the storage works which they about to complete would help to keep that beauty of nature in existe Proceeding with the particulars of the process, the chairman "The raw material is bauxite, hydrate of alumina. Now we d[illegible] mined that we would own the mines ourselves, and not pay people for the raw material, and so the mines of Glenravil, in Co Antrim, and other mines were purchased by us. and when I tel that we commenced our manufacture at a cost for the raw ma which is only something like 2s 6d. pet ton for the aluminium we you will see that the cost of the bauxite is represented by 6d. royalty. In order to get this bauxite in the most efficient way, we that it was necessary to purchase the patent of Dr. Bayer, a Ge gentlemen of very great knowledge in the matter, who had worke a successful process for the making of alumina, which had been ad in France and in America. So we purchased these patents fro Bayer, and proceeded to erect a factory at Larne, on the co Antrim. We have there a large factory which is capable of double the work we are doing there at present, because we thou necessary to erect buildings sufficiently large for our purpose. We several acres of ground there, and the factory has been built, an full operation. All the plant has been designed, ordered, and e in these works within the space of a year, which I think you wil sider a very remarkable progress at the commencement of an in like this. I am thankful to say that those works have been without any hitch; but, of course, there were little details whic to be attended to; but, at all events, we have commenced to alumina in an extremely satisfactory manner, without any dra at all. Now from Larne, which is on the sea-cost, we take our alu which has been reduced to two tons from the five tons of bauxite I spoke of just now, across to Lake Ness. Both our factories ar accessible to ships, and do not require any special carriage of an except water carriage At Foyers these two tons of alumina are into one ton of aluminium. With regard to the working of the afterwards, the Cowle's Company was working at Milton, near and we determined, instead of having any conflict with the C Company, that it would be better to put all we had into one co rather than squander our money in law and fighting. Therefo were successful in getting together this strong combi They were likely to have some litigation with the American co which produced aluminium. They contended that that compan no right to send aluminium, manufactured by the process cover this company's patents, to England. If, however, they failed i contention they could beat the American company out of the m Lord Kelvin, who seconded the motion, said it was not often the first ordinary meeting of shareholders of a great company a was submitted showing such magnificent progress as had been in the statement of facts put before them on that occason. W visited the works in September last he scarcely hoped that month of July aluminium would be placed before them actua tracted in Scotland from the ore obtained in Ireland, as was th It was most satisfactory to find that the people of Scotland, wh their own scenery and valued it, and been thoroughly with them the beginning and were now, he believed, in sympathy with wh being done by the British Aluminium Company. There wa power all over Scotland in great abundance, very little of whi been used, and the time was coming when the value of that power would be more and more appreciated and utilised. applications of it, not yet in immediate prospect, would be ma there could be no doubt that there was a future for the Highla Scotland which, a few years ago, was scarcely imagined They probably see in the course of time factories for the production minium, working under license from this company, established numbers, as well as factories of other kinds, all making use of power which, with the electricel means of applying it, was now ning to be of real importance in practical engineering. The was adopted.

Obituary.—We greatly regret having to record the death o fessor Kekule Since Professor Liebig, the Bonn professor ha bably been the greatest benefactor of applied science. his rese and ultimate declaration of the benzol and valency theories virtually revolutionised organic chemistry.

NITRATE STATISTICS.—The Permanent Nitrate Comm statistical circular for July states:—"Nitrate of soda, Total exp Europe, June, 1,522,000 qtls.; loading for Europe, July 1,555,000 qtls.; imports, Europe, June, 86,920 tons; deli Europe, June, 56,460 tons; visible supply, Europe, July 1st, and afloat, 386,060 tons."

NITRATE AMENITIES.

following circular has been issued to shareholders of the gunas Nitrate Co., Ltd. : "The attention of the undersigned, e from the beginning been directors of the Lagunas Nitrate y, Limited, has been called to a circular dated the 10th inst , y the four recently-appointed directors, who announce their of calling a general meeting with a view of obtaining con- and approval of certain legal proceedings which have been ced in the name of the Lagunas Nitrate Company against the Syndicate, Limited, now in liquidation, and its liquidators er directors. We venture to warn the shareholders in their rests not to give their proxies to the four new directors, but to he meeting personally, and decide for themselves as to the f the unfortunate controversy which has arisen between the ng elements on the board. Shortly after the formation of this y one of the signatories to the circular of July 10th purchased in on with other gentlemen 60,000 vendors' shares at a price e then market quotation for ordinary shares, which purchase presume, made with the laudable object of selling at a higher d obtaining a profit. Although the market price of the shares siderably at one time, we presume the rise was not sufficient le the purchasers to make the profit they wanted, and the in question criticised the management of the company pressed a desire to join the board, and he was accordingly ed a director. Subsequently representations were made te chairman on the subject of the constitution of the board, and he then directors retired so as to make room for the appoint- the three other gentlemen who have signed the circular. Some natters referred to in the protest to which the four directors relate to matters of account which would have long since been but for the fact that the document in question alleged that the prospectus contained misleading statements, for which allega- re is no foundation whatever, and which, as put forward by the ers of vendors' shares, could certainly under no circumstances rtained, and it also contained requirements for setting aside contracts upon the basis of which the company was formed. ndersigned will at the general meeting be prepared to meet any ry criticism upon their conduct which may be put forward on rt of the new element in the board, but abstain until these ms have been formulated and made public from entering into any ion on the subject. They consider it, however, to be their duty early moment to warn all shareholders against giving any proxies new directors and countenancing the legal proceedings which en commenced, and which cannot in any event but have a bane- ct on the shareholders' property.—We are, yours faithfully, T HARVEY, RICHARD R. LOCKETT, GEORGE FLEMING."

SMOKE PREVENTION.

deputations from the Committee for Testing Smoke-preventing nces waited recently upon the Lord Mayor of Manchester and ayor of Salford to present to each a copy of the report of the ittee embodying the results of work extending over six years. eputation consisted of Mr. Herbert Philips (vice-chairman of the ttee and chairman of the Manchester and Salford Noxious rs Abatement Association), Mr. George C. Haworth, Mr. L. E. er (Steam Users' Association), Mr. S. B. Worthington (Man- City Council), Dr. Bowman, and Mr. F. Scott (secretary).

Philips, in making the presentation to the Lord Mayor (Mr. nan A E. Lloyd), said they regarded the report as one of con- le importance, and so instead of sending it as a parcel they had t it their duty to present it with some degree of formality. The ittee for Testing Smoke-preventing Appliances was started by E. Fletcher, the late chief inspector of alkali works, and Mr. ater, the present chief inspector. Mr. F. Scott, who had so long connected with sanitary work, had been very energetic as ry of the committee. The inaugural meeting was held in Man- r in 1889 with Lord Egerton in the chair. The movement had en confined to Manchester. Meetings were held in London, w, Sheffield, Leeds, Newcastle, and Birmingham, and in all or all these places committees were formed to promote the objects movement. The work had been limited to smoke from factories ; smoke was of course a most important problem, but it was a nt one. The Public Health Act had long given power to the ities to deal with the smoke nuisance from factories. Neverthe- e evil still remained with us, the power to deal with it not being vith sufficient regularity.

Lord Mayor asked if Mr. Philips was speaking particularly eference to Manchester.

Philips said he was speaking generally, and not with special nce to Manchester. It was felt that the hesitation to give effect to the law was due to doubt as to whether manufacturers had the means within reach for complying at a reasonable cost with the requirements of the law. Therefore the work the Committee proposed to itself was to investigate that point thoroughly, and they had answered it by giving in some detail the results of the observations and tests under taken by them. They summed up their report in these emphatic words : ' In presenting their report the Committee would express their conviction that in the great majority of cases the black smoke thrown into the air during the combustion of coal is preventible, either by hand or mechanical firing, and without great cost to the consumer. Often the prevention of smoke is accompanied with a saving of expense, in that an increase of heat is developed by a more perfect combustion of the fuel, and where live fire-bars are adopted, that is, where the bars have an automatic reciprocating motion, an inferior and cheaper quality of coal can be used, and thus a further saving of expense effected. To sum up in one sentence the conclusion of the Committee as to smoke produced in raising steam : A manufacturing district may be free from manufacturing smoke—at least from the steam boilers, with which alone the Committee have concerned themselves—and as to the means by which it may be so freed this report contains ample information."

In handing to the Lord Mayor a handsomely bound copy of the report, Mr. Philips said he could not say it was light reading, but to those really interested in the subject it was most valuable and interesting.

The Lord Mayor, in thanking the deputation, said he could not promise when he would be able to peruse the report, but he had no doubt he would take an early opportunity of doing what he could to familiarise himself with its salient points. There could not be two opinions that the work of the Committee was very important, and he had do doubt that in the course of time they would see their efforts amply rewarded. He should imagine that in Manchester the emission of black smoke from factory chimneys was considerably less than it was some years ago. The Sanitary Committee of the Corporation had a very efficient staff, and he had no reason to doubt that they faithfully discharged their duty. He would not be surprised to hear that the amount of black smoke sent into the air diminished almost week by week. No doubt with the adoption of proper means it could be still further reduced. His own idea was that a good deal of the pollution of the air was due to carelessness on the part of stokers. The increasing use in Manchester of gas instead of coal would no doubt do much to bring about a better atmosphere in the city, and help to make it a more desirable place for those who were untortunately obliged to reside in it.

The deputation then withdrew.

At the Salford Town Hall the deputation was received by Mr. Huddart (chairman of the Sanitary Committee), in the absence of the Mayor

Mr. Philips said the object of the deputation was not to discusss the case of Salford with reference to smoke ; there was nothing local about the work of the Committee. At the same time one could not help fearing that the condition of Salford as regards its atmosphere was about to be considerably deteriorated, through the loss of the great open space represented by Trafford Park. Circumstances connected with the sale of the park led one to suppose that a great volcano of smoke would be set up on that side of the river which westerly winds would carry to Salford. Those who had the health of the borough in charge would probably have a great work before them in prosecuting the producers of smoke on that side of the river.

Mr. L. E. Fletcher said the Steam Users' Association had given some attention to this subject, quite independent of the investigations of the Committee. The results the Association had arrived at quite corroborated the results obtained by the Committee. There was no doubt that smoke could be prevented, with hand-firing or machine-firing. All that was needed was that boiler owners should take a personal interest in the matter.

Mr. G. C. Haworth said the question was of even greater importance in Salford than in Manchester. In Manchester the bulk of the ratable property consisted of warehouses, not dwelling-houses, while in Salford the bulk of the ratable property consisted of dwelling-houses. His own firm had taken some trouble and gone to some expense to abate the smoke nuisance so far as they themselves were concerned, and he was glad to say with some degree of success. They regarded the matter not from a philanthropic point of view but as one of pounds, shillings, and pence.

Mr. Huddart, who regretted the absence of the Mayor, said that as chairman of the Health Committee he took a deep interest in abating the smoke nuisance, and they could all sympathise with the efforts the Committee represented by the deputation were making. In Salford they endeavoured, as well as they could, to put in force the provisions of the Public Health Act with regard to smoke He quite agreed with the deputation that it could be in a great measure abated. If one manufacturer could succeed in preventing the issue of smoke from his works there was no reason why others also should not do so.

The deputation then withdrew.

SALT TRADE DINNER AT LIVERPOOL.

THE members of the Salt Chamber of Commerce, together with representatives of the salt trade in Cheshire and other gentlemen, dined together at the Adelphi Hotel, Liverpool, last week Mr. H. E. Falk presided, and among those present were Sir E. Leader Williams, Mr. Marshall Stevens, and Mr. W. H. Collier, representing the Manchester Ship Canal. The Chairman, in acknowledging the toast of "Success to the Salt Chamber of Commerce," said salt had been one of the means of making Liverpool great, and its importance to that port could not be over-estimated. As an old salt prophet he would say if they only had patience they would see a return of the period when excellent prices would again be realised for salt. Mr. Thomas Ward said that railway and canal authorities and shipowners should assist the Cheshire salt trade more than they did. Sir E. Leader Williams said that for the county of Chester the Weaver Trust had done good work, and was the finest inland navigation in England. There was no navigation in the country where they could carry materials so cheaply as they could from Winsford to Liverpool. He would not call the Ship Canal an inland navigation at all. It was a different affair altogether. They had brought the sea to Manchester, but they had not yet got the shrimps there. They had, however, got the ships, which was better. He proposed the toast of the Weaver Trust, which was acknowledged by Mr. E. S. Inman. The other toasts included the Ship Canal.

SULPHATE OF AMMONIA AS A FERTILISER.

THE annual report just published by the Kent Technical Education Committee deals with a number of experiments made at the Kent Horticultural College, and gives some particulars as to the effect of dressing the land with sulphate of ammonia in various cases. In the experiments with raspberries, Professor Luckhurst's mixture, made up of nitrate of soda, muriate of potash, sulphate of ammonia, and steam bone flour in equal parts to the extent of one-half, and the other half mineral super-phosphate, yields per acre 22 cwt. 31 lbs. to a dressing of about 1½ cwt. All the canes throve well, the foliage was healthy, and the fruit good. In the trials with potatoes, a number of artificial mixtures were used with the annexed results:—

	Yield Per Acre. Tons.	cwt.	lbs.
1. Unmanured	6	1	20
2. Sulphate of ammonia, 2 cwt.; super-phosphate, 3 cwt.	7	2	48
3. Sulphate of ammonia, 2 cwt.; sulphate of potash super 3 cwt.	8	16	48
4. Same, but with 2 cwt. of sulphate of potash	9	12	76
5. Same ,, 3 cwt. ,, ,,	10	5	76
6. Sulphate of ammonia, 2 cwt; super, 3 cwt.; kainit, 4 cwt	11	3	73
7. Duplicate of plot 5	12	19	0
8. Duplicate of plot 6	12	5	68
9. Manchester manure	11	16	36
10. Professor Luckhurst's mixture, 10 cwt.	12	11	20
11. Basic slag, 6 cwt.; nitrate of soda, 2½ cwt.	10	19	68
12. Same, with 3 cwt. of sulphate of potash	12	5	21
13. Basic slag, 6 cwt; kainit, 4 cwt.; nitrate of soda, 2½ cwt	10	19	15
14. Duplicate of plot 10	13	11	68
15. Duplicate of plot 11	10	3	36
16. Duplicate of plot 9	14	11	12
17. Duplicate of plot 12	11	6	68
18. Unmanured	12	12	13

The variety of potato used was the Imperator; and the quality of the potatoes was all very good. The Committee state that it is a question whether the increments which follow the increased dressings of potash are really due to that cause, or simply to differences in the fertility of the soil; but past experience, and the regularity of the increments on plots 2, 3, 4, 5, and 6, encourage the former view—in fact, the fertility irregularities seem to occur in the other portion of the land, including plots 7 to 18. The successive and additional increments per hundredweight of potash are then 34 cwt., 16¼ cwt., 13 cwt., and 18 cwt. for the first, second, third, and fourth hundredweight respectively; but not alone is this increase in weight evinced. There is also an improvement in quality; and taking the plots in the same order, there is respectively 69, 73, 75, and 80% of ware as compared with 31% on the unmanured land, and 56% with all the manures except potash. The Committee consider the experiments ought to be continued.

THE RE-IGNITION OF CHARCOAL.—In the review of the *brochure* on "charcoal" recently issued by the Cartvale Chemical Company, Limited, the word "not" was inadvertently omitted from the end of the third line. The true aims and conclusions of the inquiry, made by this company, were correctly stated in the last two paragraphs of the review, but this correction is necessary to preserve the compatibility of the whole.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue very firm, 3s. 1d. to 3s. 1½d. being qu 90's, and 2s. 4½d. to 2s. 6d. for 50/90's. Crude carbolic aci and 40% crystals remain at 2s. 2d. and 7¼d. respectively. naphtha is the turn firmer at 10½d., while solvent continues s 1s. 4d. Anthracene is quoted 10½d. for 30% A and 8½d. for B is steadier at 32s., f.o.b. East Coast.

Sulphate of ammonia is very unsettled, and the market is a c one. The greater pressure of production in the North is a affecting this market. Nearest values are: London outside ma Liverpool £8., Hull £7. 18s. 9d., and Leith £7. 15s. Forwar North is offering at £8. 2s 6d. to £8. 10s.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron, firm: Scotch warrants 46s. 1d.; Middlesbrough 36s. 8½d. cash, and hematite Copper, steady: Chili bars, G. O. B.'s and G. M. B's., £48. 7s. 6d. to £48. 12s. 6d. cash, and £48. 7s. 6d. to £48. three months. Tin, steady: Straits closed at £60. £61. 5s. cash, and £61. 5s. to £61. 15s. three Australian, £61. 15s.; English ingots, £64. 10s. Lead, Spanish, £11. 1s. 3d. English, £11. 3s. 9d. to £ Silesian spelter, ordinary, £17. 12s. 6d. Nickel, 1s. 2½d. A £29. 10s. to £30. Quicksilver: First hands, £6. 7s. 6d.; secon £6. 7s. *Copper shares*, steady: Cape, 2⅛ to 2⅜; Copiapo, 2⅝; Libiola, 2⅝ to 2⅞; Mason and Barry, 3⅛ to 3⅜; Ri 23⅛ to 23⅛; Tharsis, 5⅝ to 5⅞.

GLASGOW, WEDNESDAY.—Market steady, with small Scotch done at 46s. 0½d. and 46s. 1d. cash, also at 46s. 1 month; closing with buyers at 46s. 1d. cash, sellers ask 4 Cleveland done at 36s. 8d. cash, closing with buyers at 3 cash; sellers ask 36s. 9½d. Cumberland hematite done at 4 cash, also at 46s. 7½d. one month; closing with buyers at cash, sellers ask 46s. 7d. Middlesbrough hematite done at 4 cash, sellers ask 44s. 2½d.

LIVERPOOL OIL AND COLOUR MARKE

WEDNE

OILS.—Palm oil is dull, but there is a small business pa Congo, at £16. 15s., and Lagos the same as last quoted. Oliv in limited demand, but moderate sales are being made see prices remain so firm. Linseed is quiet, at 17s. 6d. to 19s. 6d. for Liverpool makes in export casks, according to quality, the closing steady. Cottonseed continues quiet, with Liverpool re 15s. 9d. to 16s. 3d., and American, 16s. 6d. per cwt. Cast steady, and there is only a limited supply of good seconds offering at 3⅛d. First pressure French, 2⅞d. to 2¾d. Tallow is moving quietly, at full prices. Resin continues to a steady tone, and holders are experiencing a fairly good in recent rates. Spirits of turpentine are rather neglected sav moderate demand on spot, at 19s. 6d. to 19s. 9d. per cwt. Pe firmer: American, 6¼d. to 7½d., and Russian refined, 5 gallon.

COLOURS.—Prices are steady, and practically without Ochres: Oxfordshire, common, £10., medium, £12., best Derbyshire, common, 40s.; medium, 50s., best, 60s.; Wels 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead Red lead unchanged. Venetian red, £6. to £10. Cobal pared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: C £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £

REPORT ON MANURE MATERIAL.

There is no special feature in the market to comment upon quotations for Florida, South Carolina and Algerian, phosphates changed, and no further important business is reported. A c River Plate bones, afloat, has been sold to the Continent at, it is re the equivalent of £3. 15s. per ton, and a further cargo also af been sold for United Kingdom on private terms, but understoo under £3. 15s. Owing to further arrivals, £3. 15s. would ap accepted for East Indian bone meal. For autumn shipmen

would be sellers at £3. 17s 6d. per ton, and probably at £3. 16s. 3d. per ton, ex quay. There is nothing doing in crushed Kurrachee bones. Nitrate of soda is firm at 7s. 10½d. per cwt. for ordinary quality, and 8s. per cwt. for fine quality. The value of due cargoes, ordinary quality, remains 7s. 11¼d. per cwt.

MISCELLANEOUS CHEMICAL MARKET.

There is but little movement in the market for heavy chemicals. Alkalies remain stationary in value, and spot prices are on the whole firm in tone. Bleaching powder moving more freely at £6. 15s., f.o.r. works, and £6 10s. to £6 15s., per ton, f.o.b., Liverpool. For certain markets abroad, £6 15s. is the quotation, f.o.b., Tyne. Ammonia alkali, 58%, steady, at £3. 7s. 6d. per ton, bags, f.o.r. Soda crystals, 35s. per ton, f.o.r. Caustic soda, f.o.b., Liverpool, 77%, £9. 7s. 6d ; 74%, £8. 7s. 6d. ; 70%, £7. 7s. 6d. ; 60%, £6. 7s. 6d. per ton. Chlorates have a slight downward tendency, but nominally unchanged: soda at 5¾d., and potash at 4½d. per lb. Sulphur is held firm, at £3. 17s 6d. per ton, f.o.r. White arsenic continues very scarce, and price steady, at £23. per ton. Potash, caustic and carbonate, are in good demand, and with light stocks, prices have a firmer tendency. Prussiate of potash quiet, at 7d. Cyanide, 1s. 1½d. In sulphocyanides little doing, and prices weak. Carbolic acid crystals meet with more inquiry, and price firm, at 7¼d for 39/40%. Aniline oil and salt firm for prompt and forward delivery. Ammonia salts generally quiet and unchanged in values: Muriate at £4. 15s., Carbonate lump at 3d., and nitrate lower at £33.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Altogether a steadier market; the very low prices recently touched appear to have stimulated a demand which has had a tendency to advance prices. The import of linseed during the week has been 17,670 quarters, viz., from St. Petersburg, 1,840 quarters; Rosario, 10,400 quarters, and New York 5,430 quarters, the price of which has moved in favour of buyers against an advance of 5s. per ton in the price of oil, which, after declining a like amount, turned steadier and dearer, being now quoted at 15s. 3d. firm, naked, spot July-August quoted 15s 4½d. to 15s. 6d , and September-December 15s 10½d.; January-April worth 16s. 3d., and May-August 16s. 6d. to 16s. 9d. Boiled and refined from £1. to £2 per ton extra. The export of the week has been 2,160 cwts. The import of cotton seed has been 1 453 tons from Alexandria. Refined cotton oil is steady at 13s. 10½d. naked, spot. August-October is quoted 14s., and November-April 14s. 3d. Crude on the spot is quoted 12s. 6d. naked; barrels 30s and casks £1. per ton extra. The export of refined oil for the week has been 5,780 cwts. Tallow remains very dull and quiet. Castor oil very firm, from 2½d. per lb. Turpentine 20s. Cod oils £17. to £19 per ton. Olive oil unchanged. Boiled oil substitute or siccative oil £11 10s. per ton, in barrels. Brown Yorkshire grease £8. per ton. Herring oil £13. Locomotive grease £10. 10s. per ton.

CAKES.—Linseed cakes steady; 95% pure, £5. 5s. Oil cakes £4 10s.; Russians, £5. 5s.; Americans, £4. 17s 6d. per ton. Cotton cakes very quiet, the run being principally upon linseed cakes at their present relatively low price; best makes, spot, £3 15s November-March £3. 10s. to £3. 12s 6d. Rape cakes unchanged.

PAINTS.—Makers busy, some of whom are running overtime. White and red leads unchanged; dry mineral colours £3. 10s to £8; ultramarines 3d. to 8d. per lb.; paint remover in good demand, 25s. to 30s. per cwt.; ready-mixed paints from 24s. per cwt.; imperial black varnish in good demand, from £5. to £5. 10s. per ton; oak varnish from 5s. 6d. per gallon.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are perhaps a shade steadier, sulphur especially being in strong demand. Soda crystals are quoted at £2. 2s. 6d., and sulphur, in bags, at £4. 5s. per ton. South Durham salt continues at 9s. 6d. per ton, f.o.b. Tees

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s. per ton nett; caustic soda, 77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 5s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, £6. 15s.; sulphide of barium crystals, £5. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

A fuller demand appears to have begun for coal. The steam coal collieries are working full time, the range of prices being from 8s. 4½d. to 8s 6d per ton, f.o.b. Tyne, for best Northumbrian steam. Bunker coals are firmer, and gas coals are also steadier, and the demand is beginning to increase. Coke is steady at the price recently quoted.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Owing to the annual holidays, which in this quarter are now being very generally observed the market is unresponsive for the time, at least the usual indications of condition and tendency are very much curtailed Production has ceased entirely, and some of the works will not resume manufacture for a further period of ten days to come, more or less. Business places of city merchants and brokers are also largely closed at this time, but for a short period comparatively, and by to-morrow the whole of these will have been re-opened. Despite the absence of the normal indication, the feeling is known to be a very languid one generally over the whole market. Nominally, prices continue unchanged. This holds also in the case of sulphate of ammonia, so far as can be made out in the absence of the usual market movements. Mineral oils and solid paraffins are for the most part very idle and little passing. Of these, as heretofore, the best line is that of lubricants, which continue in very fair call.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. 10s. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 10s., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s 10½d. to 8s. 1¼d.; sulphate of ammonia, £7. 15s. to £7. 16s. 3d. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 15s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2 1/16d. to 2¼d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 29,078 bags jaggery unrefined, 6,500 bags beet unrefined, and 2,200 bags beet refined.

New Companies.

Joseph Crosfield & Sons, Limited.—CAPITAL £300,000, in £10. shares, of which 15,000 are preference. This company has been formed to take over the business of J Crosfield and Sons, Warrington, and to trade as soap makers, and chemical and glycerine manufacturers, &c. The subscribers to the memorandum of association are:—J. Crosfield, Warrington, manufacturer; A H. Crosfield, Warrington, manufacturer; J. J Crosfield, Frodsham, manufacturer; G R. Crosfield, Warrington, manufacturer; K. E. Markel, Warrington, manufacturer; Mrs. G. J. Crosfield, Warrington; Mrs. A. L. Crosfield, Frodsham.

Anglo-Sicilian Sulphur Co, Ltd—CAPITAL £1,035,000, in 1,000,000 preference shares of £1., and 700,000 ordinary shares of 1/- each. This company has been formed to prepare, buy, sell and deal in sulphur of all grades, and to trade as chemical manufacturers, manure makers, ironfounders, etc. The subscribers to the memorandum of association are:—J. Oppenheim, 64, Avenue de Bois de Boulogne, Paris; A. G. Salamon, F.I.C., 27, Holland Park, W.; Baron de Bush, 3, Palace Gate, W.; A. P. Koe, St. Helen's, Hampton Wick, gentleman; A. H. O'B. Taylor, 11, Carlton-road, Putney Hill, S.W., gentlemen; R. Dann, 68, Herne Hill-road, Camberwell, S.E., gentleman; J. J. Halwell, 8, Lansdown-grove, Neasden, N.W., gentleman.

West Indian Oil Syndicate, Limited.—CAPITAL £20,000, in shares of £1. each. This company has been formed to trade as importers, exporters, and dealers in coal-tar, pitch, petroleum and other mineral oils. The subscribers to the memorandum of agreement are :—F. C. Stoop, 4, Hercules-passage, E.C., stockbroker; C. F. Stoop, 4, Hercules-passage, E.C., stockbroker; F. G. Goudsmit, 4, Hercules-passage, E.C., stockbroker; G. V. Gulik, 4, Hercules-passage, E.C., gentleman; F. W. Lidstone, 4, Hercules-passage, E.C., gentleman; C. F. Maclachlan, 4, Hercules-passage, E.C., clerk; W. Gerson, 4, Hercules-passage, E.C., gentleman.

Thomas Rea, Sons and Fisher, Limited.—CAPITAL £100,000., in £1. shares, of which 40,000 are preference. This company has been formed to take over the business of tanners and leather manufacturers carried on at Godalming and Bermondsey by Messrs. Rea and Son and Messrs. Fisher and Mowllin respectively. The subscribers to the memorandum of association are :—J. F. Rea, Tannery, Godalming, tanner; T. Rea, Tannery, Godalming, tanner; P. E. Fisher, 82 and 84, Tanner-street, S.E., manufacturer; W. B. Skinner, Paddington Green, W., manufacturer; P. C. Smith, 81, C street, E.C., solicitor; F. W. Allen, 7 and 8, Railway-approach C.A: T. Rea, J. P., The Shanty, Godalming; W. C. Rea, House, Godalming, tanner.

British Company, Limited.—CAPITAL £20,000., in £10. This company has been formed to acquire the patents for Great and Ireland for the manufacture of compressed gases, and to c the business now conducted at Farnham, Surrey, by the Briti bonic Acid Gas Works, and to trade as manufacturers and de charcoal, compressed and liquefied carbon dioxide, oxygen, hy nitrous oxide and acetylene. The subscribers are :—C. Andre Moorgate-street, E.C., solicitor; F. R Andrews, 10, Moorgate E.C., solicitor; A. H. Ball, 285, Wandsworth Bridge-road, secretary; J. F. Rolfe, 2 and 3, Burgon-street, Doctor's Co E.C., printer; F. M. Ball, 285, Wandsworth Bridge-road, spinster; F. F. Ball, 285, Wandsworth Bridge-road, S. W facturer; J. S. Wallace, J.P., 285, Wandsworth Bridge-road, S

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 11th.

Acetic Acid—

Holland,	93 pks.	J. Owen
,,	50	R. W. Greeff & Co.
,,	21	A. & M. Zimmermann
,,	20	H. Wallace & Co.
,,	17	Little & Johnston

Acetone—

Holland,	1 ck.	G. Rahn & Co.

Alkali—

Belgium,	140 c.	J. Harrison
France,	401	P. Hecker & Co.
,,	100	J. Harrison

Alum—

Holland,	16 cks.	R. W Greeff & Co.

Alumina—

Holland,	62 cks.	H. Wallace & Co.

Asbestos—

Italy,	£500	C. Balmanno
,,	65	A. H. Smith
Germany,	35	T. H. Lee
,,	21	Craven & Co.
Italy,	98	Imperial Asbestos Co.
,,	180	Pickford & Co.

Barytes—

Belgium,	37 bls.	W. Harrison & Co.
Holland,	94 cks.	Tough & Henderson
,,	43	Robertson, Selly & Co.
Belgium,	70	J. L. Lyon & Co.
Holland,	91	Taylor, Pinnock & Co.

Borax—

France,	3 cks.	Mory & Co

Bromine—

Germany,	6 cks. 20 cs.	A. & M. Zimmermann

Camphor—

Germany,	1,023 cs.	Prop. Hay's Wf.
,,	15	City Coml. Wf. Co.
,,	198	T. Merry & Son
,,	10	H. A. Litchfield & Co.
,,	4	Lewis & Peat
,,	34 tubs	S. Figgis & Co.
,,	331	Brown & Elmslie
,,	36	R. Warner & Co.

Caoutchouc—

Germany,	90 c.	Prop. Bull Wf.
Rangoon,	137	L. & I. D. Jt. Co
Zanzibar,	81	,,
Rangoon,	80	Prop. Hay's Wf.
Singapore,	100	L. & I. D. Jt. Co.
Rangoon,	60	A. Howden & Co.
Belgium,	4	Leach & Co.
Singapore,	146	Huttenbach & Co.
E. Indies,	9	L. & I. D. Jt. Co.

Castor Oil—

France,	50 brls.	Lucas & Spencer's Wf., Ld.
	15 cs.	C. Windschuegl & Co.
E. Indies,	100	Anderson, Weber & Co.
France,	20 brls.	,,
,,	50	J. T. Morton
Belgium,	12	A. Brown & Co.
Italy,	10	A. Laming & Co.
,,	25	M. D. Co.

Caustic Potash—

Belgium,	10 drs.	Petri Brs.
Germany,	10	J. M. Steel & Co.

Chemicals *(otherwise undes.)*—

U. States,	£1,150	H. Wigmore
Germany,	£15	F. W. Berk & Co.
France,	39	Flageollet & Co
Germany,	680	A. & M. Zimmermann
Belgium,	6	C. W. Law
Germany,	6	Phillipps & Graves
Belgium,	96	Société John Cockerill
Holland,	17	J. Barber & Co.
,,	28	Typke & King
Germany,	515	T. H. Lee
Holland,	117	,,
Germany,	65	L. & I. D. Jt. Co.
Holland,	21 pks.	A. & M. Zimmermann

Chrome Ore—

Sydney,	252 t.	D. W. Greenbrough
Norway,	23	R. Waters

Citrate of Lime—

Italy,	23 cks.	W. C. Bacon & Co.

Cream of Tartar—

France,	6 cks.	B. & F. Wf. Co.
,,	4	C. Atkins & Nisbet
Holland,	19	Kirkpatrick & Co.
Spain,	6	B. & F. Wf. Co.

Cresoline—

U. States,	25 cs.	Lunham & Moore

Dextrine—

Germany,	20 bgs.	Pronk, Davis & Co.

Dyestuffs—

Alizarine

Holland,	32 pks.	W. Balchin

Annatto

Ceylon,	28 cs.	Hoare, Wilson & Co.

Argols

Italy,	1,961 bgs.	B. Jacob & Sons
,,	250	Thames S. Tug & L. Co., Ld.

Cochineal

Canaries,	12 bgs.	G. S. Bruce
,,	20	L. & I. D. Jt. Co.

Cutch

Rangoon,	250 bxs.	J. Harrison
,,	550	Leach & Co.
,,	990	A. Howden & Co.
E. Indies,	895 cs.	Ralli Brs.

Divi Divi

E. Indies,	107 bgs.	Walker, Munsie & Co.

Extracts

Belgium,	25 cks.	Leach & Co.
Canada,	80	A. J. Humphery
Germany,	1	M. D. Co.
U. States,	40 pks.	Williams, Torrey & Co.
Austria,	200	A. J. Humphery
U. States,	50 bxs.	W. Burton & Sons
France,	40	T. H. Lee
U. States,	1	H. Herrmann

Fustic

B. W. I.,	30 t.	Benekendorff, Berger & Co.
,,	2	Gillespie Brs. & Co.

Gambier

Singapore,	245 bls.	Adamson, Gilfillan & Co.
,,	239	Vokins & Co.
,,	99	Prop. Hay's Wf.
,,	499	W. Balchin
,,	226	J. Greig
,,	413	Sollas & Sons

Indigo

E. Indies,	37 chts.	G. Suter
,,	5	Binny & Co.
Sp. W. I.,	11	Parsons & Keith
Belgium,	1 cs. 1 brl.	Société John Cockerill
E. Indies,	37	Seton, Laing & Co.
,,	30	J. Owen
,,	62	L. & I. D. Jt. Co.
,,	13	Croysdale & Co.
,,	24	Park Macfadyen & Co.
,,	20	J. Hatton Hall & Co

Logwood

B. W. I.,	47 t.	S. Dobree & Sons
,,	84	Benekendorff, Berger & Co.
,,	1	T. Hankey & Co.
,,	26	Anderson, Anderson & Co.

Myrabolams

E. Indies,	625 bgs.	Beresford & Co.
,,	625	Darling Brs.
,,	645	Marshall & French
,,	2,560	L. & I. D. Jt. Co.
,,	610	S. Barrow & Bro.

Orchella

Portugal,	50 bls.	R. Marti

Shumac

Italy,	250 bgs.	Bevington & Sons
,,	100	A. E. Piggott

Tanners' Bark

Natal,	85 t.	A. & W. Nesbitt
,,	51	Boutcher, Mortimore & Co.
,,	130 bgs.	A. J. Humphery
,,	54 t.	Brown & Elmslie
Belgium,	28	Leach & Co.
Natal,	25	Beresford & Co.
,,	17 10 c.	Flack, Chandler & Co.

Farina—

Germany,	100 bgs.	M. D. Co.
Holland,	50	J. Knill & Co.
,,	50	J. Barber & Co
,,	100	G. Hornzee
,,	200	Seaward Brs.

Glucose—

France,	400 pks.	400 c.	W. E. Cole
,,	200	200 c.	Frier, Mayer & Co.
Germany,	200	200	,,
Melbourne,	98	94	Joshua Brs.
U. States,	250	250	Jenkins & Co.
,,	100	100	Deering & Robottom
,,	185	870	L. Norman & Co.
,,	750	750	Pea

Glue—

——,	£1,594	

Iodine—

U. States,	3 bls.	Prop.

Iron Oxide—

Austria,	14 cks.	
Belgium,	20	Taylor B

Litharge—

Germany,	6 cks.	H.
Holland,	61	Spies B

Magnesium Sulphate—

Germany,	250 bgs.	Jes

Manure—

E. Indies,	462 t.	Escom
Germany,	15	Deering & R
Sydney,	5	Culverwell,
Belgium,	20	A. Hun
E. Indies,	300	,,

Methyl Alcohol—

Holland,	3 brls.	Little &
U. States,	40	S

Minium—

Holland,	11 cks.	J. Barb

Molasses—

Egypt,	28,000 c.	J. R. Fran
U. States,	273	50 tnks.

Naphtha—

Belgium,	13 brls.	J.

Naphthol—

Holland,	4 cks.	G. Rah

Ochre—

France,	8 cks.	O'Hara
Holland,	6 cs.	Phillipps

Paint—

Germany,	1 cs.	T.

Phosphate Rock—

France,	200 t.	T. Farm

Pitch—

U. States,	33 brls.	Dunsak Br
B. W. I.,	117 bgs.	W. H. Ha
France,	1 brl.	H. Hill
Germany,	46	Linck, Moelle

Plumbago—

Belgium,	10 bgs.	Brit. Anti-
Ceylon,	82 cks.	R. G. Ha
,,	30 brls.	Doulto
Germany,	105 cks.	H. G
Italy,	100	Beck &
Ceylon,	116 brls.	Williams,

Potash—

France,	40 c.	J. Barle

Potassium Bisulphite—

Germany,	10 kgs.	R. W. Greef

Potassium Carbonate—

France,	85 c.	Fe

Potassium Chloride—

Germany,	508 bgs.	Bessler, Wa
Holland,	30 cks.	H. Johnson

Potassium Prussiate—
Holland, 4 cks. A. & M. Zimmermann

Potassium Sulphate—
Germany, 254 bgs. Bessler, Waechter, & Co.

Pumice Stone—
Italy, 14 t. O'Hara & Hoar

Pyrites—
Spain, 1,457 t. Naylor, Benzon, & Co.

Rosin—
Belgium, 10 brls. Lucas & Spencer's Wf.
U. States, 6,012 H. Hill & Sons
" 1,900 Perkins & Homer

Saltpetre—
E. Indies, 674 bgs. Perkins & Homer
Germany, 69 cks. P. Hecker & Co
" 30 L. & I. D. Jt. Co.
" 44 Petri Brs.
" 40 J. Hall & Son

Soda—
France, 102 c. Prop. Hay's Wf
Belgium, 196 A. Brown

Sodium (Metal)
Germany, 20 cs. L. & I. D. Jt. Co.

Sodium Bicarbonate—
Holland, 15 c. A. & M. Zimmermann

Sodium Carbonate—
Belgium, 20 c. T. H. Lee
Holland, 10 "

Sodium Hyposulphite—
Holland, 100 c. F. C. Devon & Co.

Sodium Phosphate—
Holland, 1 ck. R. W. Greeff & Co.

Starch—
Belgium, 150 cs. Leach & Co.
Holland, 122 Little & Johnston
Belgium, 535 G. Suter
" 180 T. H. Lee
Austria, 50 bgs. R. G. Hall & Co
Holland, 150 cs. Hernu, Peron, & Co.
" 115 T. H. Lee
" 70 Phillipps & Graves
" 50 Lunham & Moore
Germany, 50 J. Hall, junr., & Co
France, 420 W. E. Cole
U. States, 93 bgs. L. Sutro & Co.
Belgium, 200 cs. E. & T. Pink
Germany, 1,155 Horne & Co.

Stearine—
France, 80 sks. H. Walbaum & Tosetti
" 57 bgs. H. Hill & Sons
U. States, 265 "
" 10 Colchesters & Woolners
Belgium, 455 H. Hill & Sons

Sulphur—
Italy, 500 t. W. C. Bacon & Co.
" 10 F. Smith
" 155 G. Boor & Co
" 20 J. Greig
" 50 J. Taylor
" 11 R. & W. Paul
" 10 P. Hecker & Co.
" 5 C. Tennant, Sons, & Co.

Talc—
France, £40 Blackwell, Sons, & Co.
Austria, 5 J. Graves

Tar—
Germany, 190 brls. W. Beard & Son

Tartaric Acid—
Holland, 8 pks. C. F. Gerhardt
" 50 B. & F. Wf. Co.
" 20 Kirkpatrick & Co.
Brindisi, 8 B. & F. Wf. Co.
" 13 W. M. Smith & Sons
" 10 F. C. Devon & Co.

Ultramarine—
Holland, 13 cs. Haeffner, Hilpert, & Co.
" 20 cks. Hernu, Peron, & Co.
" 5 cs. 6 pks. Phillipps & Graves
" 20 Steinhoff, Sons, & Co.
Belgium, 11 W. Harrison & Co.
" 4 cks. Sawer, Sons, & Co.
" 5 20 brls. Leach & Co.
Germany, 24 T. Hamilton
Holland, 40 Thames S. T. & L. Co.

Varnish—
Germany, 2 pks. T. H. Lee
U. States, 78 Taylor Brs
Melbourne, 6 Dawson Brs.

Verdigris—
France, 1 ck. W. J. Murray

White Lead—
Holland, 20 cks. A. & M. Zimmermann
Belgium, 20 Perkins & Homer
Germany, 16 H. Lambert
" 43 Taylor Brs.
Belgium, 16 J. L. Lyon & Co
" 135 T. & W. Farmiloe
Germany, 21 M. Ashby, Ltd.
" 38 D. Storer & Sons
Holland, 8 Page, Son, & East
" 28 Burrell & Co
" 48 brls. W Balchin
" 48 cks. Spies Brs. & Co.
" 57 T. & W. Farmiloe

Wood Pulp—
Belgium, 1,234 bls E. J. & W Goldsmith
Norway, 250 pks. Trugh & Henderson
" 900 W. E Bott & Co.
" 180 bls. Becker & Co.
" 609 M G. Skratmes
" 8 L. Knoblauch
" 1,000 W. D Cork, jnr.
" 4,000 E J. & W Goldsmith
" 3,040 pks. A. Wertheim & Co.
" 200 80 bls. Hummel & Co.
Denmark, 80 Johnsen & Jorgensen
Sweden, 240 W. G. Taylor & Co.
Norway, 80 "
" 80 W. Friedlaender
" 80 bls. A. H. Keep

Zinc Oxide—
Holland, 73 cks. Spies Brs. & Co.
Belgium, 10 J. Harrison

LIVERPOOL.

Week ending July 9th.

Acetate of Lime—
New York, 1,666 bgs.

Aniline Colours—
Paris, 3 cks. Seine & Mersey S. S. Co., Ld.

Barytes—
Rotterdam, 128 cks.
Antwerp, 34 50 bgs.

Bone Meal—
Karachi, 25,800 bgs.
Calcutta, 1,120

Camphor—
Hamburg, 1 cs.

Castor Oil—
Calcutta, 612 cs. Ralli Brs.

Chemicals *(otherwise undescribed)*
Dunkirk, 1 cs.
Hamburg, 23

Colours—
Hamburg, 5 cks. 10 cs.
Antwerp, 2
Ghent, 15 brls.

Cottonseed Oil—
N. Orleans, 1,145 brls.

Dried Blood—
B. Ayres, 262 bgs.

Dyestuffs—
Cochineal
New York, 16 bgs.
Orchella
Lisbon, 97 bls.
Turmeric
Calcutta, 9 bgs.

Glucose—
New York, 299 brls.
Dunkirk, 200 bgs.
Rouen, 40

Glue—
Rouen, 25 cks
Hamburg, 20 bgs
St. Nazaire, 20
Rotterdam, 8 100

Iron Oxide—
Montreal, 34 pks. W. Lister & Son

Lead Acetate—
Hamburg, 19 cks.

Limestone—
Antwerp, 2 crts. J. T. Fletcher & Co.
" 1 cs.

Lithopone—
Hamburg, 8 cks.

Mica—
Calcutta, 5 cs.

Ochre—
Rouen, 33 cks. R. J. Francis & Co.

Oxalic Acid—
Rotterdam, 6 cks.

Paint—
Boston, 1 bx.
Para, 27 kgs. W. M. Walters & Co.
Hamburg, 6 cs.

Paraffin Scale—
New York, 450 brls. Thompson & Bedford
Baltimore, 100

Phosphate—
Ghent, 1,000 bgs. J. T. Fletcher & Co.

Pitch—
Antwerp, 7 cks.

Potash—
Antwerp, 20 dms.
Dunkirk, 9 cks. 10 brls.

Potassium Carbonate—
Stettin, 37 cks. Sachse & Klamm

Potassium Silicate—
Hamburg, 2 brls.

Rosin—
Carrabelle, Flo., 4,450 brls
New York, 200
Boston, 250

Salt—
Hamburg, 1 brl.

Saltpetre—
Calcutta, 1,339 bgs Ralli Brs.
" 321
Hamburg, 4 cks. 20 kgs. 2 brls.

Soap—
New York, 1 cs. Burroughs, Wellcome & Co.
Boston, 4 Boots Pine Drug Co.
" 4 Barclay & Sons

Soapstone—
Bordeaux, 300 bgs. G G. Blackwell, Sons & Co.

Sodium Nitrate—
Hamburg 10 brls.

Starch—
Boston, 500 bgs.
Baltimore, 150 sks.
New York, 250
Antwerp, 80 cs. J. T. Fletcher & Co.
Rotterdam, 80

Stearine—
Rotterdam, 4 cks.

Tallow—
Boston, 25 tcs. Stolterfoht, Sons & Co.
" 700 brls.
New York, 1 brl. 50 hds.

Tartar—
Bordeaux, 9 cks.

Treacle—
New York, 16,250 brls.
Bordeaux, 3 cs.

Ultramarine—
Hamburg, 4 cs.

Waste Salt—
Hamburg, 3,020 bgs.

White Lead—
Rotterdam, 123 cks.
Ghent, 11 brls.

Wood Pulp—
Rotterdam, 186 bls.
Oporto, 500 Crown Timber Co.
Sarpsborg, 4,414 Kellner Partington P. P. Co.
Boston, 297 rolls

Zinc Ashes—
Rouen, 17 cks.
Boston, 40 brls.

Zinc Oxide—
New York, 50 brls.
Rotterdam, 50 cks.
Antwerp, 25

MANCHESTER.

Week ending July 11th.

Acetate of Lime—
New York, 2,429 bgs.

Albumen—
Paris, 4 cs.
Libau, 5 Stott, Coker, & Co.

Alkali—
Rotterdam, 1 ck. 2 cs.

Aluminous Cake—
Rotterdam, 145 cks. 50 bgs.

Ammonium Chloride—
Antwerp, 5 brls.

Aniline Oil—
Rotterdam, 2 cks.

Antimony—
Boulogne, 1 ck.

Antimony Salts—
Rotterdam, 15 cks.

Barytes—
Rotterdam, 200 bgs.
Antwerp, 100

Bone Ash—
Rio Grande, 190 t.

Carbolic Acid—
Rotterdam, 22 cks.

Chemicals *(otherwise undescribed)*
Rotterdam, 20 cks.

Colours—
Rotterdam, 18 cks. 19 cs. 15 bxs. 201 brls.
Antwerp, 4 10

Cream of Tartar—
Rotterdam, 20 kgs.

Dyestuffs—
Extracts
New York, 44 bls. Hervey, Peck, Hervey
Logwood
Taiahan, 13,685 qntls.

Farina—
Rotterdam, 100 bgs.
Hamburg, 640
Stettin, 1,300 Stott, Coker, & Co.

Glucose—
New York, 250 brls. T. M. Duche & Sons

Glue—
New York, 10 brls. D. Moseley & Sons
Rotterdam, 140 bgs.

Limestone—
Antwerp, 2 cs.

Nitrate—
Rotterdam, 8 cs.

Ochre—
Treport, 100 cks.

Paraffin Scale—
New York, 450 brls. Anglo-American Oil Co., Ld.

Pitch—
Paris, 2 cs.

Potash—
Rotterdam, 5 cks.
Treport, 42

Saltpetre—
Hamburg, 22 cks.

Sodium Phosphate—
Antwerp, 4 brls

Starch—
New York, 400 bgs. T. M. Duche & Sons
" 2,244
Rotterdam, 10 cs.
Hamburg, 500 837
Antwerp, 326

Stearine—
Rotterdam, 7 bls.

Tallow—
New York, 350 tcs 50 hds. Co-op. W'sale Society, Ld.

Tartar—
Hamburg, 10 cks.

Tartaric Acid—
Rotterdam, 24 cks. 10 kgs.

Ultramarine—
Rotterdam, 5 cs.

White Lead—
Rotterdam, 6 cks.
Antwerp, 7

Zinc Ashes—
Stettin, 15 cks. Stott, Coker, & Co.

Zinc Oxide—
Rotterdam, 25 brls.

Zinc White—
Rotterdam, 75 brls.

HULL.

Week ending July 11th.

Albumen—
Riga, 15 cs. Wilson, Sons, & Co., Ld.
" 6 cks. Helmsing & Son

Alum—
Rotterdam, 37 cks. W. & C. L. Ringrose

Ammonia—
Copenhagen, 2 btls. Wilson, Sons, & Co., Ld.

Asbestos—
Rotterdam, 2 bls. W. & C. L. Ringrose

Barytes—
Rotterdam, 34 cks. Hutchinson & Son
Antwerp, 37 Bailey & Leetham
" 142 H. F. Pudsey
200 bgs.
Bremen, 17 cks. G Holmes & Co.
Amsterdam, 24 Hutchinson & Son
Riga, 50 cs. Wilson, Sons, & Co., Ld.
Antwerp, 200 bgs.

Castor Oil—
Trieste, 1 brl. Wilson, Sons, & Co., Ld.
Venice, 10 cs. "

Chemicals *(otherwise undescribed)*
Bari, 40 pks. Wilson, Sons, & Co., Ld.
" 2 cks.
Bremen, 3 cs. 1 kg. Veltmann & Co.
Hamburg, 2 cks. Wilson,
7 pks. Sons, & Co., Ld.
Antwerp, 39 "
Dunkirk, 13 17 "

Cod Oil—
Aalesund, 215 brls. Wilson, Sons, & Co., Ld.

Colours—
Rotterdam, 13 brls. 1 bx. W. & C. L. Ringrose
39 pks. Ringrose
" 8 cks. Hutchinson & Son
Antwerp, 21 pks. Wilson,
10 brls. Sons, & Co., Ld.
Hamburg, 16 5 cs. "

Cream of Tartar—
Rotterdam, 5 cks. Hutchinson & Son

Cryolite—
Copenhagen, 2 cks. Wilson, Sons, & Co., Ld.

Dextrine—
Stettin, 50 bgs.
" 160 Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 9 cks. W. & C. L. Ringrose
46 brls.
Cutch
Hamburg, 50 cs. Wilson, Sons, & Co., Ld.
Indigo
Rotterdam, 5 chts. Hutchinson & Son
Shumac
Trieste, 16 bgs. Wilson, Sons, & Co., Ld
Palermo, 170 "
" 1,380

Farina—
Stettin, 65 bgs.
Ghent, 182 cs. Wilson, Sons, & Co. Ld.
Stettin, 1,970 "

Glucose—
Rotterdam, 50 bgs. Hutchinson & Son
Stettin, 300

Glue—
Boston 1 bx. Wilson, Sons & Co, Ld.
Fiume, 57 bgs.
Christiania, 1 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 7 Hutchinson & Son
Antwerp, 5 bls. 6 cks. Bailey & Leetham
Stettin, 11
Rouen, 68 44 Rawson & Robinson
Antwerp, 5 Wilson, Sons, & Co., Ld.
Dunkirk, 50 "

Kaolin—
Rotterdam, 240 bgs. Hutchinson & Son

Lead Nitrate—
Rotterdam, 7 cks Hutchinson & Son

Limestone—
Antwerp, 1 cs. H. Hare & Co.

Litharge—
Rotterdam, 6 cks. Hutchinson & Son

Ochre—
Rouen, 43 cks. Rawson & Robinson

Paint—
Boston, 16 cs. Wilson, Sons, & Co., Ld.
Bremen, 1 Brown, Atkinson, & Co.

Phosphate—
Ghent, 160 t. Wilson, Sons, & Co., Ld.

Pitch—
Amsterdam, 26 cks. W. & C. L. Ringrose

Potash—
Hamburg, 13 dms. Bailey & Leetham

Pumice Stone—
Messina, 879 pks. Wilson, Sons, & Co., Ld.
" 92
Hamburg, 20 cs. "

Rosin—
Brunswick, Ga., 1,500 brls. G. & J. Rawstorn, Ld.

Saltpetre—
Hamburg, 1 ck.
" 10 kgs. Wilson, Sons, & Co., Ld.

Soap—
Boston, 10 cs. Wilson, Sons, & Co., Ld.
Bari, 47 "

Starch—
Amsterdam, 40 cs. W. & C. L. Ringrose
Bremen, 2,511 Veltmann & Co.
Amsterdam, 208 Hutchinson & Son

Stearine—
Antwerp, 10 bgs. Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 514 bgs. Wilson, Sons, & Co., Ld.
" 723 100 t.

Tallow—
Boston, 1,125 tcs. Wilson, Sons, & Co., Ld.
Dunkirk 9 cks. "

Tannic Acid—
Hamburg, 8 cks. Wilson, Sons, & Co., Ld.

Tar—
Uleaborg, 1,080 brls 240 hf -brls.

Tartar—
Messina, 2 cks. Wilson, Sons, & Co., Ld.

Turpentine—
Brunswick, Ga., 2,000 brls. G. & J. Rawstorn, Ld.
Savannah, 2,461

Ultramarine—
Bremen, 8 cks.

Varnish—
Hamburg, 2 dms. Wilson, Sons, & Co., Ld.

White Lead—
Rotterdam, 38 cks W. & C. L. Ringrose
20 Hutchinson & Son
" Antwerp, 14 Bailey & Leetham
Amsterdam, 78 Hutchinson & Son

Wood Pulp—
Helsingfors, 44 bls. J. Good & Sons
Hamburg, 17 Wilson, Sons, & Co., Ld.
Trieste, 70

Zinc Oxide—
Rotterdam, 40 cks. Hutchinson & Son

Zinc White—
Rotterdam, 20 cks. Hutchinson & Son

GLASGOW.

Week ending July 16th.

Acetate of Lime—
New York, 468 bgs.

Asbestos—
Rotterdam, 6 bls. J. Rankine & Son

Barium Sulphate—
Antwerp, 50 bgs.

Caoutchouc—
Rotterdam, 1 cs. J. Rankine & Son

Castor Oil—
Antwerp, 100 cks.

Colours—
Rotterdam 6 bxs. 1 cs. 3 cks. 5 brls. J. Rankine & Son
Hamburg, 4 2 and qty.
Antwerp, 3
Rotterdam, 108 pks.

Dyestuffs—
Alizarine
Rotterdam, 31 cks J. Rankine & Son
" 167 pks.
Madder
Rotterdam, 7 cks. J. Rankine & Son

French Chalk—
Fiume, 190 bgs. P. M'Intosh & Sons

Glue—
Nantes, 4 cks.
Rouen, 12 16 bls.

Iron Oxide—
Fiume, 27 cks. Ferguson & Reid

Ochre—
Bordeaux, 12 cks.
Rouen, 50

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Phosphate—
Bona, qty.

Rosin—
New York, 616 brls.

Salicylic Acid—
Hamburg, 2 cs.

Soap—
Nantes, 1 cs.
Fiume, 68

Sodium Acetate—
Rouen, 15 cks.

Sodium Sulphide—
Rotterdam, 3 brls. J. Rankine & Son

Starch—
Rotterdam, 144 cs. J. Rankine & Son
Antwerp, 300 50 bgs.
Fiume, 40 W. Stirling & Son

Stearine—
Bordeaux, 50 bgs.
Antwerp, 31

Tartar—
Oporto, 7 cks.
Bordeaux; 15

Treacle—
New York. 200 brls. Waddell & Bryson

Varnish—
Antwerp, 2 cks. 2 cs.

Waste Salt—
Hamburg, 138 cks. 1,097 bgs.

White Lead—
Rotterdam, 61 cks. J. Rankine & Son

Whiting—
Rouen, 110 bgs.

Wood Pulp—
Fiume, 408 bls.
Christiania, 1,032
Tonsberg, 728
Montreal, 283

Zinc White—
Rotterdam. 50 cks. J. Rankine & Son

TYNE.

Week ending July 11th.

Alum Earth—
Hamburg, 40 cks.

Asbestos—
Rotterdam, 1 ble. Tyne S. S. Co.

Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co.

Barytes—
Rotterdam, 150 bgs.

Cod Oil—
Trondhjeim, 5 brls.

Colours—
Antwerp, 1 ck. Tyne S. S. Co.

Infusorial Earth—
Rotterdam, 67 bgs. Tyne S. S. Co

Limestone—
Antwerp, 5 crts. Tyne S. S. Co.

Manganese Ore—
Hamburg, 1 bg. Tyne S. S. Co.

Paint—
Christiania, 2 cs.

Pitch—
Rotterdam, 13 cks. Tyne S. S
Plumbago—
Hamburg, 11 cks. Tyne S. S
Starch—
Antwerp, 20 cs. Tyne S. S
Rotterdam, 210 "
Stearine—
Antwerp, 13 bgs. Tyne S. S
Wood Pulp—
Gothenburg, 122 pks
Christiania, 370 bls.
Zinc Oxide—
Antwerp, 52 brls. Tyne S. S
Rotterdam, 25 cks. "
Zinc Sulphate—
Gothenburg, 20 cs.

GOOLE.

Week ending July 8th.

Alizarine—
Rotterdam, 45 cks.
Alkali—
Calais, 2 cks.
Alum—
Rotterdam; 20 bgs.
Aniline—
Rotterdam, 235 cks. 28 cs.
Antimony—
Boulogne, 12 cks.
Barytes—
Rotterdam, 11 cks.
Caoutchouc—
Boulogne, 12 cs.
Chemicals *(otherwise under*
Rotterdam, 1 pk.
Colours—
Hamburg, 14 cks. 20 cs.
Dyestuffs *(otherwise undesc*
Boulogne, 14 cks. 20 cs. 32 pk
Rouen, 37
Farina—
Hamburg, 360 bgs.
Delfszyhl, 150
Glucose—
Hamburg, 56 cks.
Glue—
Rotterdam, 10 bgs.
Logwood—
Jamaica, 514 t.
Madder—
Rotterdam, 1 ck.
Potash—
Dunkirk, 22 cks. 40 dr
Calais, 83
Saltpetre—
Rotterdam, 100 bgs.
Hamburg, 4 cks.
Starch—
Ghent, 50 cs.
Antwerp, 36

GRIMSBY.

Week ending July 11th.

Albumen—
Antwerp, 3 cs.
Caoutchouc—
Antwerp, 7 cs.
Chemicals *(otherwise undesc*
Hamburg, 6 cks. 2 cs.
Rotterdam, 34 pk
Colours—
Antwerp, 12 cks. 47 pk
Rotterdam, 6
Hamburg, 17 6 cs. 73
Extracts—
Dieppe, 38 cks.
Indigo—
Rotterdam, 3 pks.
Manure—
Hamburg, 9 cks.
Paint—
Hamburg, 16 dms.
Pitch—
Dieppe, 10 cks.
Starch—
Antwerp, 60 cs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

...ek ending July 15th.

–			
	6 cs.		£24
...don,	10 kgs.		17
...,	3 t.	2 c.	37
–			
	14 c.		£16
...ia –			
...,	16 cs.		£150
...ia (Liquid)—			
...le,		10 c.	£12
	2 t.	3	70
...ium Carbonate –			
...ersburg,	16 t.		£450
...es,		10 c.	20
...ium Chloride—			
...dorf,	2 t.		£47
...,	2		47
		10 c	25
...burg,	1	1	38
...ium Nitrate—			
	103 cks.		£481
...,		4 c.	11
...ium Sulphate—			
...,	130 t.		£1,040
...p,	240		1,945
...rous Ammonia –			
...dam.	24 cyldrs.		£50
...n Nitrate—			
...ork,	2 t.		£36
...s –			
...ork.	2 t.		£37
...nite of Lime—			
...,	10 t.		£38
–			
...a,	1 ck.		£17
... Janeiro,		10 c.	10
...,	12 cs.		14
...nd,	3 t.		6
...n—			
...,	20 drs.		£25
...ic Acid—			
	100 drs.		£32
...,	10 cs.		26
	10 cks.		19
	27		22
...lles,	26		65
... Soda—			
...own,		5 c.	£6
...rne,	3 t.	12	95
...in,		10	10
	5		105
...als *(otherwise undescribed)*			
...berg,	1 t.	18 c.	£90
...le,	3 kgs.	10 cs.	25
...,	2	15	46
...rne,	1	19	53
...rg,		4	11
...agen,	1	1	44
...o,		7 pks.	17
...nd,	1 brl.	14 cks.	251
...t,	5 t.		200
...ne,		18	98
...own.		4	11
...ertad,	1	15	75
...Acid—			
...ersburg,	1 t.	15 c. 4 cks.	
...gs.			£482
...	1 kg.	3	93
...rg,	10		61
	5 1	10	220
...,		10	61
		2	15
...,		6	45
...a,	2 cs.		14
...roducts—			
...line Oil			
...dam,	15 drs.		£240
...zol			
...dam,	50 cks.		£203
...dam,		23 drs.	239
...t,	49		193
...sote			
...eans,	1,750 cks.		£772
...htha			
...ne,	26 brls.		£75
...hthaline			
...lles,	50 bgs.		£50
...in,	13 cks.		19
...h			
...eans,	415 cks.		£203
...g,	30 t.		50
...	20		60

Tar

Natal,	500 drs.		£14
Pt. Elizabeth,	300		9
Melbourne,		50 brls.	46
N. Orleans,		700 cks.	355
Demerara,		10	12
Penang,	50		18
Wyborg,	565		375

Toluol

Boulogne,	30 cks.		£101

Coal Products *(otherwise undes.)*—

Melbourne,	25 drs.		£18
Sydney,		25 brls.	26
Natal,	400		15

Copper Sulphate –

Lisbon,	25 t.		£412
Hobart,	5	3 c.	99

Cream of Tartar—

Hiogo,		10 c.	£51
Auckland,		10	55
Sydney,	3 t.		297
Melbourne,	1		105
Wellington,		12	58
Adelaide,		5	26

Disinfectants—

Shanghai,	25 cks.		£175
Punta Arenas,	2 cs.		11
Calcutta,	3		13
Brisbane,	4		10
New York,	2 t.		16
Melbourne,	20 cks.		11
Otago,	5 pks.		28

Manure—

Natal,	40 t.		£540
Havre,	4	19 c.	45
Riga	101	4	210
Gothenburg,	130		310
Melbourne.	7		84

Nitric Acid—

Yokohama.		10 c.	£16

Phosphorus—

Rio de Janeiro,		3 c.	£39
Wellington,		4	30

Potash—

Calcutta,	4 kgs.		£10

Potash Crystals—

New York,	3 cs.		£35

Potash Salts—

Auckland		2 c.	£163

Potassium Bicarbonate—

Hiogo,	20 kgs.		£98
Philadelphia.	1 t	7 c.	35

Potassium Bichromate –

Rio de Janeiro,		4 c.	£12
Wellington,		17	34
Salonica,		18	42

Potassium Cyanide—

Fremantle,	3 t.	19 c.	£374
Townsville,	10	2	958
Auckland,	1	10	140
Madras		100 cs.	600
Cape Town		3	17
Rio de Janeiro,	1	12	253
Melbourne		20	234

Potassium Prussiate –

Boston,	10 cks.		£170
Yokohama,		10 c.	33
Antwerp,	3		56
New York.	66		1,124
St. Petersburg,	4 t.	10	295
Stettin,	2		130

Salicylic Acid—

Sydney,		8 c.	£86
Melbourne,		3	43

Salt Cake—

Melbourne,	25 t.		£60

Saltpetre –

Keppel Bay,	1 t.	1 c.	£23
Pt. Elizabeth,		9	10
Sydney,	6		142
Bahia,	3	5	77
Gibraltar,	25		518
Santos,	2	4	52
Lisbon,	3	13	79

Sheep Dip—

Algoa Bay,		18 c.	£20
Natal,	1,000 drs.		197
B. Ayres,	3 0	21 t. 18	80 cs. 843
Melbourne,	50 kgs.		100
Pt. Elizabeth,		14	20

Soda Alkali –

Rotterdam,	5 t.	3 c.	£32

Soda Ash –

Oamaru,	1 t.	8 c.	£10

Soda Crystals—

Fremantle,	3 t	15 c	£9
Natal,	4	6	10

Sodium Acetate—

Melbourne,	1 t.		£15

Sodium Bicarbonate—

Auckland,	2 t.		£12
Algoa Bay,	1	5 c.	9
Adelaide,	6	1	40
Lisbon,		9	9
Pt. Elizabeth,	1	16	13

Sodium Sulphate—

Ghent,	105 t.		£135

Strontium Nitrate—

New York,	12 t.	12 c	£300
Boston,	3	2	73

Sulphur—

Cape Town,	13 t.	8 c.	£126
Algoa Bay,	180 kgs.	10 cks.	84
Natal,	60 cs.		15

Sulphuric Acid—

Natal,	25 cs.		£19
Penang,		13 c.	10

Tartaric Acid—

Brisbane,		10 c.	£64
Yokohama,	1 t.		124
Calcutta,		2	15
Sydney,	2	15	346
Wellington,		5	35
Adelaide,		10	64

LIVERPOOL.

Week ending July 15th.

Albumen—

Boston,	5 t.	8 c.	£123

Alum—

Montreal,	3 t.	11 c.	2 q.	£20
Messina,		14		3
Galatz,	1	18		9
Syra,	1	13	3	8
S. Paulo,	1	5		6
Bourgas,	8	.	2	38
Valparaiso,	1	13	3	8
Sydney,	12	15	2	63
Malta,	2			10
Constantinople,	2		3	9
Larnaca,	1	8		7
Havana,	8	5	3	20

Ammonium Carbonate –

M. Video,		14 c.	2 q.	£21
Genoa,	1 t.	5		53
Bordeaux,	1	5		44
Newcastle	1			31
London, Ont.,	1	2	2	17
Montreal,	1	2	2	17
Paris,	1	2		43

Ammonium Chloride—

Genoa,		5 c.	£9
Messina,		6	10
Rotterdam,		6	7
St. Petersburg,	2 t.	10	62
San Francisco,	1	7	28
Galatz,		15	24

Ammonium Sulphate—

Philadelphia,	51 t.	12 c.	1 q.	£425
Barbadoes,	51	1		420
N. Orleans.	50	12	2	410
San Francisco,	102	5	3	830
Messina,	5	1	3	40
Samarang,	126	16	2	991
Sourabaya,	240	10	3	2,110
Las Palmas,	51	16		433

Antimony Sulphide—

Boston,		18 c.	£144

Bleaching Powder –

Bilbao	28 cks.		
Bombay,		10 bxs.	
Boston,	618		
Genoa,	102		
Ghent,	73		
Leghorn,	30		
Lisbon,		56 brls.	
Montreal	18		
Naples,	42		
New York.	161	65	
Philadelphia,	143		
Rouen,			35 dms.
San Francisco,		50	
San Sebastian.	27		

Boracic Acid—

Melbourne,	2 t.	10 c.	£76
Havre,	4	1	125

Borax –

Danzig,	1 t.	1 c.	3 q.	£20
Lisbon,	1	1		20
Melbourne,	1			21
Montreal	2	14		48
San Juan, P.R.,	1	5		24
Valparaiso,	3	3		63
Hamburg.	3	17		68
Boston,		5		14
Copenhagen,	1	2		21
Antwerp,	6	6		126
Rotterdam,	9	1		177
Vera Cruz,	1	1		19
Stettin,	1			19
Knstendje,	5	14		105
Havre,	2			90
Konigsberg,		11	3	12
Genoa,	4	18	2	98

Calcium Chloride—

Boston,	2 t.	15 c.	£7

Carbolic Acid—

Shanghai,	2 cs.			£6
N. Orleans,	5 t.	13 c.	1 q.	277
C. C. Castle,	3 dms.			9
Alexandria,	5 t.	18	1	50
Hamburg.	10	17		560
Madras,		1		5
Venice,		4	2	14

Carbon Bisulphide—

Para,	9 t.		£6

Caustic Soda—

Alexandria,	10 dms.		
Alicante,	40		
Amsterdam,	165		
Baltimore,	300		
Barcelona,	40		
Batavia,	40		
Bilbao,	60		
Boston,	223		
Bourgas,	61		
Calcutta.	33		
Cartagena,	30		
Catania,	18		
Ceara,	35		
Delagoa Bay,	20		
Dunkirk,	35		
Fiume,	102		
Genoa,	459		
Havana,	40		
Konigsberg.	18		
La Guayra,	12		
Leghorn,	123		
Maceio,	20		
Malaga,	148		
Messina,	15		
Montreal,	91		
Newfairwater,	30		
New York,	415		
Oporto,	12		
Para,	70		
Quebec,	120		
Rangoon,	15		
Rio de Janeiro,	5		
Rotterdam,	17		
San Francisco,	200		
Santos.	30		
Santander,	30	30 brls.	
Seville.	265		
Sourabaya	8		
Sydney,	71		
Tampico,	70		
Tarragona,	30		
Trieste,	15		

Chemicals *(otherwise undescribed)*

New York,	9 t.	5 c	7 cks.	£365
Samsoun,		6		10
Pernambuco,		1		10
Barcelona,		9		111
Riga,	1			35
San Francisco,	2	7		78
Genoa.	1			29
Odense,	1			28
Konigsberg,	1	18		54
Montreal,	1			30
Hamburg,	1	17		54
Odessa,	15			488
Boston,	9	7	2 q.	556
Stettin,	2	9		81
Philadelphia,	13	14		449
Penang,		6	1	8

China Clay—

Bombay.	862 cks.		
Bordeaux,	200		
Boston,	1,191		
Montreal.	400		

Citric Acid—

Piræus,		1 c.	£6

Coal Products—
Aniline Colours
Beyrout, 5 cs.
Shanghai, 50
Yokohama, 5
Aniline Salts
Bombay, 1 ck.
Constantinop'e, 11 kgs.
Montreal, 28 cs
New York, 8
Oporto, 6
Ponce 5
Creosote
Lagos, 16 dms.
Creosote Oil
Pordeaux, 100 brls.
Creosote Salts
Antwerp, 5 t. £18
Riga, 7 25
Naphthaline
Antwerp, 98 bgs.
Riga, 93
Pitch
Galatz, 25 brls.
Halifax, 4 kgs.
Tar
Batavia, 70 runlts.
Lagos, 10 brls.
Seville, 12 cks.
Sourabaya, 50
Tar Oil
Copenhagen, 4 dms.

Coal Products (*otherwise under.*)—
Genoa, 5 cks. 1 cs.

Cobalt Oxide—
Lisbon, 1 bx. £19
Gijon, 2 c 3 q. 55

Copper Sulphate—
Ghent, 5 t. 1 c. £86
Passages, 9 18 166
Antwerp, 1 16 1 q. 29
Libau. 5 80
Stettin, 1 7 22
Rouen, 5 1 86
Tampico, 7 7
Melbourne, 15 261
Galatz, 19 14 3 355
Genoa, 4 19 76
Bordeaux, 390 14 3 6,917
Paris, 10 0 3 171
Marseilles, 99 14 1 1,740

Copperas –
Rabat, 3 t. 8 c. 1 q. £8
Constantinople, 4 1 9
Syra, 2 1 1 5

Cream of Tartar—
Bordeaux, 2 cks. £44
St. John, N'fld., 5 c. 25

Cyanide—
Rotterdam, 1 t. 4 c. 2 q. £130

Disinfectants—
Hamburg, 6 c. 2 q. £10
Calcutta, 10 cks. 5

Gelatine—
New York, 100 bxs. 1 cs.
Boston, 73

Iron Oxide—
Para, 5 t 14 c. £13

Magnesia—
New York, 1 q. £25
Panama, 1 c. 2

Magnesium Carbonate –
B. Ayres, 13 c. 2 q. £35

Magnesium Sulphate
Porto Alegre, 7 c. 2 q. £5
Bombay, 4 t. 14

Manure—
Bordeaux, 1 c. 2 q. £2
New York, 1 t. 7 17
Boston, 5 1 1 86

Ochre—
E. London, 50 brls.
Halifax, 12

Oxalic Acid—
Genoa, 1 t. 4 c. 3 q. £34
Boston, 11 334
Barcelona, 14 23

Paint—
Antwerp, 7 cks. 2 dms.
Bahia, 7
Baltimore, 5
Beyrout, 25 kgs.
Bilbao, 2 bxs.
Bombay, 210
B. Ayres, 56 cs. 53 30
Cadiz, 60
Cameroons, 140
Cartagena, 2 cs.
Cavite, 76
Cienfuegos, 2
Cuidad Bolivar, 26
Colon, 3
Galatz, 100
Gibraltar, 4 cs. 10
Gijon, 1
Gd. Bassam, 10
Havana, 3 4 1 brl. 2 tcs.
Hobson's Bay, 60 kgs.
Hong Kong 51 dms.
Lisbon, 42 199
Manaos, 10
Manilla, 12 980
Monrovia. 28
Mossamedes 2
M. Video 9 brls. 1
Natal, 40
N. Orleans. 13
New York, 10 cs. 10 20
Oporto, 30
Ponce, 6
Port Said, 15
St. Vincent, 1 2
Sierra Leone, 105 pks. 41
Singapore, 44
Talcahuano, 15 brls. 44

Painters' Colours—
Alexandria, 100 cks.
Ancona, 14
Bombay, 40 kgs 5 cs
Oporto, 2
Para, 30 dms. 12
Ponce, 5 brls.
Puerto Cabello, 2 bxs.
Rangoon, 10 dms.
Salaora. 2 brls
Salaverry, 5 30
Salonica, 2
Valparaiso, 15

Paraffin Wax—
Gibraltar, 2 cs.

Phosphorus—
Hong Kong, 5 c. £30
Yokohama, 19 125
M. Video, 12 88
Hiogo 43 cs 4 t. 13 1,360
Vera Cruz, 7 50

Potassium Bichromate—
Halifax, 8 c. £18

Potassium Carbonate –
New York, 5 t. 3 c. £92

Potassium Chlorate—
Copenhagen, 2 t. 10 c. £99
Philadelphia, 5 190
Gothenburg, 1 40
New York, 6 5 235
Amsterdam, 1 40
Genoa, 12 25
Hiogo, 2 10 98
Hong Kong. 15 29
Funchal, 3 6
Sydney, 5 195
Gutujewsky, 37 10 1,464
St. Petersburg, 2 18 178

Potassium Prussiate—
Montreal, 6 c. £19
Genoa. 2 t. 10 158

Potassium Silicate—
Amsterdam, 1 t. 4 c. 2 q £10

Salt –
Antwerp, 41 t. 8 c.
Baltimore, 815
Belize, 20
Boston, 480
B. Ayres, 25
Cabenda, 3
Cape Coast, 10
Cameroons, 57
Cape Lopez, 11
Copenhagen, 913
Demerara, 4 brls.
Egwanga, 20
Ferrol, 1
Ghent, 210
Halifax, 600
Iceland, 70
Landana. 20
Laurvig, 235
Livingstone, 58
Matadi, 50
Melbourne, 201
Montreal, 1,930
Muculla, 4
Newcastle, 150
New York, 60
Noqui. 64 10
Puerto Barrios, 100
Reykjavik, 180
Shediac, 128 10
Summerside, 310
Sydney, 30 50 dms.
Trinidad, 18

Saltpetre—
Macsio 9 c. 3 q. £12
Pernambuco, 3 t. 8 2 90

Satinite—
Calcutta, 3 t. 11 c. 2 q. £10

Sheep Dip—
Ascuncion, 8 c. 3 q. £10
B. Ayres, 8 t. 100
Delagoa Bay, 1 5 2 35

Soap—
Alexandria, 11 cs.
Algoa Bay, 660 bxs. 25 bdls.
Amsterdam. 500
Athens, 16
Antwerp, 140
Barbadoes, 300
Batavia, 1,000
Belize, 810
Bereby, 40
Boma, 30
Bombay, 49
Cape Town, 3,650 3 20 kgs.
1 tnk.
Cartagena, 2
Chama, 50
Constantinople, 300 22
Curacao, 50 58 bls.
Delagoa Bay, 1,228 30
E. London, 2,516 26
Ferrol, 10
Genoa, 45
Gibraltar, 50
Grenada, 50
Havre, 770
Iloilo, 1
Jamaica. 188
Kingston, 250
Lagos, 24
Las Palmas, 1,240
Maceio, 6 brls.
Manaos, 250
Matadi, 60
Mauritius, 250
Melbourne, 500
Montreal, 39
Muculla, 10
Mussera, 10
New York, 475 50
Old Calabar, 474
Palma, 465
Para, 1
Piræus, 105
Pt Elizabeth, 520 60
Pt. Natal, 298 12
Rangoon, 500
Rotterdam, 450
St. John's, 28
St. John's N'fd., 20 35
Shanghai, 1,000
Trinidad, 1
Victoria, W.C.A., 190
Warri, 200
Yokohama, 4
Zanzibar, 250 bdls.

Soda Alkali—
Ibrail, 35 brls.
Leghorn, 97
Lisbon, 35
Montreal, 70
Savanilla, 100

Soda Ash—
Antwerp, 50 bgs.
Baltimore. 1,800 133 tcs.
Bordeaux, 25 cks.
Boston, 680 63 20
B. Ayres, 200
Genoa, 100
Ghent, 80
Gothenburg, 95
Hamburg, 100 kgs.
Havana, 2
Hiogo, 177
Maranham 135 brls.
Montreal, 75 15 tcs.
New York, 950 14 110
Philadelphia, 368 155
Puerto Cabello, 12
Rio de Janeiro, 71 110 brls.
Rotterdam, 100
Salonica, 80
Vera Cruz, 7
Yokohama, 100

Soda Crystals—
Boston, 250 bgs. 140 brls.
Halifax, 70 kgs.
Montreal. 150 50
Philadelphia, 144 cks.
Quebec, 75
Sydney, 34

Sodium (Metal)—
Rotterdam, 2 t. 8 c. £333

Sodium Bicarbonate—
Alexandria, 25 kgs. 15 brls.
Amsterdam, 20
Baltimore, 590 100 cks.
Bombay, 140
Bordeaux, 20 40
E. London, 30
Galatz, 34
Genoa, 50
Ghent, 10
Hamburg, 126 5
Hiogo, 500
Konigsberg 170
Kustendje, 34
Libau, 120
Lisbon, 40
Madras, 40
Malaga, 40
Montreal, 100 25 b
Nantes, 69
Naples, 100
Oporto, 20
Rotterdam, 40 20
Rouen, 30 b
St. John's, N'fd., 20
St Petersburg, 158
Salonica, 10
Stettin. 40 2
Tampico, 200
Venice 50
Yokohama, 1,000

Sodium Carbonate—
Boston, 56 brls.
New York, 56

Sodium Chlorate—
Hamburg, 4 kgs.

Sodium Hyposulphite –
Callao, 40 kgs.
Genoa, 20
Tampico, 17 cks.

Sodium Nitrate—
New York, 3 cks.

Sodium Sulphate—
Bombay, 5 t. 7 c.
Montreal, 70 brls.

Starch—
Bombay, 3 bgs.
Ferrol, 20 cs
Lisbon, 2

Strontia—
Hamburg, 150 t.

Sulphur—
Boston, 900 t. 5 c.

Superphosphates—
Bilbao, 2 t. 8 c.
Nantes, 10
Las Palmas, 15

Tin Oxide—
Montreal, 6 c.

Tin Phosphate—
Riga, 5 t. 6 c.

Varnish—
Boma, 6 cks.
Boston, 7 cs.
B. Ayres, 2 3
Corfu, 2
La Guayra, 2
Maceio, 2
Madras, 3
Manila, 3
M. Video 24
New York, 4

White Lead—
Bahia, 2 t. 3 c.
Beyrout, 10 kgs.
Manila, 2 brls.

Zinc Chloride—
Bombay, 10 t. 17 c.

MANCHESTER

Week ending July 15

Alkali—
Bushire, 2 cs.
Bussorah, 7 brls.

Alum—
Bombay, 37 brls.

Aniline Colours—
Rotterdam. 3 kgs.

Aniline Oil—
Hamburg, 4 dms.

Anthracene—
Rotterdam. 30 cks.

Benzol –
Rotterdam. 40 cks.

Carbolic Acid—
Treport, 80 bdls.

Copper Sulphate—
Santos, 1 ck.

Copperas—
Santos, 1 ck.

Disinfectants—
Bombay, 60 cks.

Extracts—
Hamburg, 4 cks.

Iron Oxide—
Treport, 17 cks.

Logwood—
Bussorah, 130 ps.
Santos, 5 cks.
Oxygen —
Treport, 148 tubes
Potassium Bichromate—
Bushire, 22 cs.
Salt—
Rotterdam, 200 t.
Sodium Bicarbonate —
Treport, 75 pks.
Sodium Carbonate—
Santos, 1 ck.
Tallow—
Rotterdam, 9 cks.
Tar—
Treport, 30 cs.
Tar Oil—
Hamburg, 25 dms.
Tar Salts—
Antwerp, 3 cks.
Toluol—
Rotterdam, 24 cks. 5 dms.

HULL.

Week ending July 11th.

Alkali —
Hamburg, 1 ck.
Ammonium Sulphate—
Honolulu, 3,726 bgs.
Rotterdam, 412
Caustic Soda —
Abo, 27 cks.
Danzig, 35 dms.
Rotterdam, 38
Riga, 200
Stettin, 1
Wyburg, 11
Chemicals (*otherwise undescribed*)
Antwerp, 3 cks.
Constantinople, 295
Christiania, 38 1 cs. 12 pks. 1,214 slbs.
Copenhagen, 10
Drontheim, 8
Danzig, 40 6 119
Gothenburg, 5
Hamburg, 2 80
Helsingfors, 1 5
Libau, 50
Odessa, 20
Rotterdam, 42 60 10
Riga, 130
Stettin, 2
St. Petersburg, 1 1
Stockholm, 60
Cobalt—
Antwerp, 2 cs.
Cottonseed Oil—
Antwerp, 1,230 c.
Amsterdam, 344
Bremen, 170
Christiansand, 17
Copenhagen, 338
Danzig, 101
Ghent, 69
Gothenburg, 50
Hamburg, 925
Rotterdam, 1,709
Stavanger, 28
Creosote—
New York, 50 brls.
Dyestuffs (*otherwise undescribed*)
Boston, 11 cks.
Helsingfors, 50
Reval, 1 1 cs.
St. Petersburg, 2
Linseed Oil —
Antwerp, 100 c.
Amsterdam, 101
Aalesund, 28
Bergen, 37
Christiansund, 37
Christiania. 1 687
Christiansand, 17
Copenhagen, 17
Drontheim, 220
Hamburg, 17
Jersey, 1
Stavanger, 184
Manure—
Abo, 84 t.
Gothenburg. 98
Painters' Colours—
Antwerp, 21 cks. 5 cs. 58 pks.
Amsterdam, 21
Abo, 6 4 dms.
Boston, 22
Bremen, 1
Christiania, 5
Christiansand, 6 pks.
Copenhagen, 29 2 8 dms.
Drontheim, 5
Danzig, 15
Gothenburg, 1 4 pks.
Hamburg, 2 1
Helsingfors, 14 7 dms.
Jersey, 20 6
Konigsberg 80
New York, { 20 / 20 pks.
Odessa, 38
Rotterdam, 14 2 1 2 dms.
Riga, 50
Rouen, 15 2
Stettin, 106 25
Stockholm, 71 3
Pitch—
Antwerp, 222 t.
Helsingfors, 200 cks.
New York, 200
Salt—
Reval, 2,000 bgs.
Soap—
St. Petersburg, 1 cs.
Stockholm, 20
Starch—
Copenhagen, 100 cs.
Sulphur—
Danzig, 600 bgs.
Tallow—
Amsterdam, 15 cks.
Dunkirk, 112
Gothenburg, 11
Libau, 150
Stockholm, 6
Wasa, 13
Tar—
Amsterdam, 16 cks.
Abo, 75
Copenhagen, 3
Dunkirk, 54
Helsingfors, 50
Uleaborg, 10
Varnish—
Rotterdam, 2 cs.
Whiting—
Hamburg, 20 bgs.

GLASGOW.

Week ending July 16th.

Albumen—
U.S.A., £205
Ammonium Sulphate—
Venice 50 t. 12 c.
Bleaching Powder—
Melbourne, 29 t. 9½ c.
Chemicals (*otherwise unadescribed*)
Cape Town, £31
Coal Products—
Anthracene
Rotterdam, 24 t.
Creosote
France, £1,433
Creosote Oil
Danzig, 66 t. 17 c.
Pitch
Bombay, £150
Danzig, 59 t. 5 c.
Canada, 27
Tar
Colombo, £24. 10s.
Danzig, 1 302 brls.
Canada, £98
Malmo, 100
Calcutta, 3 6
Coal Products (*otherwise undes.*)—
Rotterdam, £930
Cod Oil—
Melbourne, £105
Copperas—
Bombay, 24 t. 7 c.
Dried Blood —
Rouen, 40 t. 4 c.
Dyestuffs (*otherwise undes.*)—
Canada £24
Extracts—
Australia, £89. 14s.
Canada, 492 12
U.S.A., £98
Farina—
Antwerp 5 t.
Lamp Black—
Madras, 1 t. 10 c.
Lead Nitrate —
Canada, 2 t. 14 c.
Linseed Oil—
Gisbrone, 2 t. 8 c.
Algoa Bay, 113¾
Canada, 6 6½
Cape Town, 1 10 lbs.
Magnesium Sulphate—
Adelaide, £37
Manure —
Venice, 11 t. 3¼ c.
Omaru, 15
Muriatic Acid—
Bombay, 2 t. 10 c.
Painters' Colours—
Adelaide, £162
Melbourne, 431
Rotterdam, 56
Algoa Bay, 52
Calcutta, 641
Petrolia, 136
Paraffin Wax—
Fiume, £20
Antwerp, 1 t. 18¾ c.
Rouen, 1 14
Trieste, 121
Potash Salts—
Delagoa Bay, £1,325
Potassium Bichromate —
Australia, £20
Venice, 410
Antwerp, 358
Rotterdam, 197
Soap —
Canada, 2 t. 6¾ c.
Soda Crystals —
Bombay, 2 c.
Sodium Bichromate —
Venice, 2 t. 16 c.
Antwerp, 6 1½
Rouen, 5 6¾
Sulphuric Acid —
Madras, £85
Bombay, 3 t. 7½ c.
Colombo, £83. 10s.
Superphosphates —
Dunedin, 50 t.
Tallow—
Antwerp, 94 t. 18½ c.
Rotterdam, 16 7
Turkey, 3 14¾
Treacle—
Christiania, 6 t. 5 c.
Norrkoping, 101 12
White Lead—
Adelaide, £93. 12s.

TYNE.

Week ending July 11th.

Alkali —
Riga, 61 t. 13 c.
Rotterdam, 9 3
Amsterdam, 25 3
Gothenburg, 11 15
Antimony—
Hamburg, 1 t.
New York, 30
Arsenic—
Leghorn, 1 t. 17 c.
Naples, 11
Asbestos—
Bergen, 2 c.
Barium Binoxide—
New York, 18 cks.
Hamburg, 5 t. 11 c.
Barium Carbonate —
Hamburg, 159 t.
Bleaching Powder—
Bergen, 6 t. 8 c.
Aarhuus, 10
Riga, 31 15
Gothenburg, 20 10
Rotterdam, 15 3
Christiania, 56 17
Antwerp, 62 5
Hamburg, 43 12
New York, 50 11
Amsterdam, 24
Caustic Soda—
Riga, 10 t. 10 c.
Smyrna, 2
Antwerp, 8 14
Hamburg, 20 7
New York, 45 13
Gothenburg, 55 6
Colours —
Genoa, 1 t. 14 c.
Glue —
Gothenburg, 10 c.
Litharge—
Riga, 4 t.
Gothenburg, 2 14 c.
Hamburg, 5 18
Magnesia—
Hamburg, 5 c.
Ochre—
Bergen, 4 t. 5 c.
Paint—
Antwerp, 3 t.
Potassium Bichromate—
Smyrna, 1 t. 13 c.
Salt—
Richibucto, 250 t.
Soap—
Copenhagen, 1 q.
Soda—
Rotterdam. 23 t. 16 c.
Copenhagen, 1 9
Naples, 2 12
Christiania, 25
New York, 50 1
Amsterdam, 10
Gothenburg, 47 13
Soda Ash—
Bergen, 5 t. 7 c.
Copenhagen, 5 10
Naples, 14
Christiania, 5 10
Gothenburg. 13 16
Sodium Hyposulphite—
New York, 35 t. 8 c.
Sodium Silicate —
Smyrna, 19 t. 16 c
Sodium Sulphate —
Riga, 20 t. 10 c.
Gothenburg. 50
Christiania, 15
Antwerp, 50 2
Westervik, 214 10
Starch —
Copenhagen, 5 c.
Sulphur—
Gothenburg, 105 t.
White Lead—
Riga, 4 t. 2 c.
Copenhagen, 5 5
Seville, 2 4

GOOLE.

Week ending July 8th.

Benzol —
Rotterdam, 23 cks.
Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck.
Hamburg, 40
Coal Products (*otherwise undes.*)—
Antwerp, 7 cks.
Dunkirk, 6
Boulogne, 25 9 tins 10 dms.
Ghent, 1 2
Rotterdam, 100 1 cs.
Colours—
Amsterdam, 1 cs.
Boulogne, 3
Ghent, 4 cks.
Hamburg, 1 tin
Rotterdam, 2
Dyestuffs (*otherwise undescribed*)
Ghent, 1 cs.
Hamburg, 40 cks.
Manure—
Boulogne, 48 bgs.
Pitch —
Antwerp, 402 t.

GRIMSBY.

Week ending July 11th.

Chemicals (*otherwise undescribed*)
Hamburg, 40 cks.
Coal Products (*otherwise undes.*)—
Dieppe, 83 cks.
Hamburg, 1
Rotterdam, 3
Colours—
Antwerp, 4 cks. 3 cs.
Dieppe, 2 1 1 dm.
Rotterdam, 2
Hamburg, 5 pks. 13 dms.
Dyestuffs (*otherwise undescribed*)
Dieppe, 5 cks.

PRICES CURRENT.

WEDNESDAY, JULY 22ND, 1891.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. ..per cwt.	5/9 & 8/9		
,, Glacial .. .. ,,		40/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	3
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	5
,, Sulphate (grey) London .. .. per ton	8	0	0
,, ,, (grey) Hull .. .. ,,	7	18	9
Aniline Oil (pure) .. .. per lb.	0	0	8½
Aniline Salt ,, ... ,,	0	0	8
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	3	1
,, 50/90 .. .. ,,	0	2	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7¼
,, (crude 60°) .. .. per gallon	0	2	3
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	10
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	4
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	48	7	
,, Sulphate .. .. ,,	16	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	5	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	10	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	19	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magnesia .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. .. per ton	2		
Manganese, Sulphate .. .. ,,	16		
Borate .. .. per cwt.	2		
,, Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P. .. .. .. ,,	0		
Oils:—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	19		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	21		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. ..nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	20		
,, ,, (Caustic Potash) 70/75 % .. ,,	19		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % .. .. ,, ..	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, .. F.O.R.	4		
,, ,, (Alkali) 58 % .. .. .. ,, ..	3		
,, ,, (Soda Crystals) .. .. .. ,, ..	2		
,, Acetate (ex-ship)	14		
,, Arseniate, 45 %	14		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton.	20		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	6		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25% .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	8		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	6		
,, (Roll Brimstone) .. .. ,,	5		
,, Brimstone: Best Quality .. .. .. ,,	3		
Superphosphate of Lime (26% .. .. ,,	2		
Tallow .. .. ,,	18		
Tin Crystals .. .. per lb.	0		
,, English Ingots .. .. per ton	64		
Zinc (Spelter) .. .. ,,	17		
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5		

THE

CHEMICAL TRADE JOURNAL

AND

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CURRENT TOPICS.

DANGEROUS OCCUPATIONS.

IT will be remembered that towards the end of last year a departmental committee was appointed to prosecute further inquiries into dangerous occupations, and they duly went forth on their tour of inspection. As they progressed, the scope of their inquiry was increased until it embraced about twenty-four industries.

We cannot quite make up in our own minds whether the nature of the report that has been issued is due to the inability of the Committee to get through more in the time, or whether they found when they came to go carefully into matters there was not such a great deal to report; but, any way, they state at the outset that the report is incomplete, and we can cordially agree with the statement.

The interim report as it stands certainly gives us no cause to modify the opinions we stated when the Committee first set to work. The list of industries to be investigated was much more formidable than the conclusions concerning the trades so far considered.

There is no doubt that there are points and cases which have been brought out to good purpose. It is not desirable that a charge for respirators should be made on the users. The carelessness and love of wanton destruction so fully developed in many operatives can, we feel, be met in a better way—better in that the employer cannot be blamed for placing an obstacle in the way of the general use of respirators, while the proper use of the latter is at the same time ensured.

There is one thing very evident—namely, that the committee have gone far enough to see that rules alone are no good, and that the difficulty does not lie in the making but in the enforcement of regulations.

So far similar committees have been content with recommending the use of drinks and respirators and the provision of washing accommodation, etc. It never seemed to occur to these worthies that they might possibly be suggesting impracticabilities, or aggravating the conditions of labour by substituting a risk with a positive evil.

The present committee have, however, awakened to the difficulties surrounding the judicious use of respirators. Having had a sense of these difficulties we had a few remarks to make, and made them within two months after this committee set to work. They now appear to have got as far as we did then, and no farther. There is a doubt as to the correctness of their statement that so far no respirator has been designed to combine "lightness, coolness, and ease." The first object of a respirator should be efficiency, to which the other *desiderata* are subservient. The committee apparently ignore the former altogether. If due consideration is paid to the claims of efficiency, it is not so easy to state definitely what is to be considered reasonably light, cool, and easy. The labour of the coal-miner has, by the agency of ventilation systems,

blasting agents, and coal-cutters, been lightened in no slight measure; but, with infinite improvements, there is little prospect of his calling ever being made one of coolness and ease. It is much the same with respirators. Modifications may be made, but so long as efficiency is paramount they are never likely to be the coolest and easiest of things. The real difficulty arises from the "cussedness" of human nature. Operatives as a rule prefer to run risks, and assume the *rôle* of martyrs, rather than incur the slightest inconvenience or comment by following the dictates of common sense. In this they are, after all, very little different from their social superiors and sanitary mentors, who frequently prefer pills by the box to the trouble of walking a mile a day. Perhaps the committee will deal with this aspect in their final report.

COMBINATION IN VITRIOL.

The Americans are known to be fond of pools, trusts, and combinations, and their latest is to all accounts an effort to consolidate the interests of sulphuric acid manufacturers. The present endeavour is by no means the first, but so far all attempts have ended in achieving nothing. This latest effort is quite in embryo, no definite terms having been settled on as yet. Hard times generally make the consummation of a combine a simpler task than when all parties directly concerned can see their way ahead; but it is not at all certain whether anything will come of this latest departure in the States.

On this side we are not greatly enamoured of combines. The word is somehow connected with salt, nitrate of soda, copper, iodine, and a few other commodities, the remembrance of which is not altogether consolatory. We scarcely think, therefore, in the event of the American acid manufacturers carrying their proposals to maturity, that the move is likely to be copied at home.

If the combination ever comes into operation, however, it will be instructive to the trade here to keep an eye on its workings, for there is no cheaper way of gaining experience than that of watching the experiments of others, only the opportunity is not always forthcoming.

THE DANGERS OF WOOLSORTING.

THE monthly meeting of the Bradford Chamber of Commerce was held last week, Mr. G. J. Hoffman (vice-president) being in the chair. The Secretary (Mr. F. Horner) presented a batch of correspondence, the first item of which was a letter from Mr John Brigg, M.P., calling attention to the announcement of the Home Secretary in reply to a question put by Mr. Flannery, M.P., that he intends as early as practicable to certify woolsorting "a dangerous employment" under the Factory and Workshops Act, 1891. Letters and telegrams had passed between Mr. C. Fawcett (chairman of the Wool Supply Committee) and Mr. Flannery, M.P., in which the former drew attention to the hardship which would be inflicted on the Bradford woolsorters and staplers if the proposed regulations were enforced all round.—Mr. Flannery explained that he only intended his question to have relation to the sorting of dangerous wools.—The Wool Supply Committee on July 13 adopted a resolution strongly protesting against the proposal to certify woolsorting a dangerous employment, and declaring that such action would cause grave inconvenience and difficulty to the trade, and would seriously curtail the employment of woolsorters. The resolution further affirmed that there was no justification for declaring woolsorting generally to be dangerous, all English and most Colonial wools being perfectly innocuous, and that out of the 510,000,000 lbs. of wool, mohair, alpaca, etc., consumed in the United Kingdom in 1895, only a very small percentage could be fairly described as dangerous. Copies of this resolution were sent to the Home Secretary and the local members of Parliament. In reply, a letter was received from the Home Office to the effect that the Secretary of State thought the Chamber were under a misapprehension as to the effect of his proposed declaration. Sir Matthew Ridley understood that certain rules had been largely adopted in Bradford with the view of preventing anthrax among woolsorters, and he was anxious to make similar rules compulsory in the trade generally—a proposal to which he thought the Chamber would have no objection. Before su could be established, however, it was necessary that the whole of woolsorting should be constituted one to which special rul be made applicable.

Mr. C. Fawcett said that he had seen privately a copy of posed new regulations, and he believed they would be in every satisfactory. The subject was then allowed to drop.

The Patent List.

This list is compiled from Official sources in the Mi Technical Laboratory, under the immediate supervi George E. Davis and Alfred R. Davis, who report profe upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATE

Manure Mixers. E. Paternotte. 15,473 July 13.

Producing Calcium Carbide. F. H. Haviland, A. Holloway, J. and W. H. Murch. 15,489. July 13.

Disintegrating and Grinding Apparatus. J. N Askham. 15,506

Converters for Bessemerising Copper. T. D. Nicholls. 15,523.

Manufacture of Hydrogen and Carbon Monoxide or Dioxid Boult. 15,525. July 13.

Desilverising Lead Bullion. W. H. Howard. 15,542. July 14.

Bleaching, etc., Paper Pulp. J. Tait. 15,552. July 14.

Artificial Fuel. C. Weygang. 15,567. July 14.

Smoke Consuming Furnaces. C. H. Lloyd. 15,572. July 14.

Purifying Starch, etc. C. Wahl. 15,575. July 14.

Separating Naphtha and other Volatile Solvents from Oil Dymond. 15,597. July 14.

Water Purifying Apparatus. W. G. Waterman. 15,611. July 14.

Precipitating Precious Metals from Solution. J. Pourtales July 14.

Smoke Prevention. W. Waddell and D. Waddell. 15,671. July 15.

Organic Compounds of Carbonic Acid. O. Imray. 15,687. July

Extracting Gold and Recovering Chemicals Used. J. P. van 15,833. July 17.

Producing Chlorine by the Electrolysis of Soluble Salts. A. J. Chalandre. 15,831. July 17.

Soap. W. Downs. 15,938. July 18.

Separating Metals from Zinc and Lead Ores. J. A. May July 18.

Converting Ferric into Magnetic Oxide of Iron. R. H. Peal July 18.

Improved Manufacture of Phosphorus. L. L. Billaudot. 15,977.

ABSTRACTS OF LATEST COMPLETE SPECIFICATI

These abstracts are specially prepared for the Chemical Trade and ALL RIGHTS *of publication are* RESERVED. *This is th series of abstracts of Chemical and allied patents accessib public.*

An Improved Process for Obtaining Carbonic Acid from Gas M the Dry Way, and Apparatus therefor. W. Raydt, 195, Silberb Stuttgart, Germany. Eng. Pat. 13,456. July 12, 1895.

Instead of using solutions of alkaline carbonates for the abso carbon dioxide, the solid is used, provision being made for t of the small amount of water essential to the reaction. The a fitted with a series of trays, of wicker and gauze, charged with carbonate, and over which the products of combustion pass. of perforated pipes, situated above each tray, supplies the w fine spray at intervals. Alternately above and below each tray pipe passes for heating the bicarbonate when formed, and pelling the CO_2, while it also serves for the passage of cold water to cool the apparatus before the absorption process is r There are four figures: one showing the absorber in section and t an arrangement for a continuous working cycle.

Improvements in the Manufacture of Carbon Bisulphide, and A therefor. A. J. Holt, Irwell Chemical Works, Manchester, and G Moorside-street, Droylsden. Eng. Pat. 14,912. August 7, 1895.

By the present method there is a considerable loss of sulph avoid this, the following modification is suggested:—The usua ing arm or pipe is prolonged and another exit pipe carried then the condenser, in addition to the customary exit pipe from t The feeding pipe is also trapped, so that as the sulphur m S-trap is sealed and the escape of any CS_2 is prevented. If th escaping from the top of the retort contain too much sulphur, on the upper exit is closed and the vapours are again drawn o carbon in passing down the retort and away by the bottom ex In this way the retort is kept clear of obstructions and the y creased. There are six drawings.

rovements in and Connected with the Production of Chlorine and Zinc. F. M. Lyte, 60, Finborough-road, South Kensington, S.W. Eng. Pat. 5,813. August 22, 1895.

ıe blende is first converted into crude zinc sulphate, then purified converted into zinc chloride. The removal of magnesium sulphate ficult, but the presence of a small quantity is not injurious. The chloride is then concentrated. Towards the end of this operation igh temperature necessary causes the zinc chloride to dissociate, ıat the addition of metallic zinc during the operation is advisable. zinc chloride is next heated to a temperature slightly above the ing point of zinc and decomposed by electrolysis, a carbon anode a cathode of fused zinc being employed. There is said to be no under such conditions of the formation of a powdery deposit of as referred to in Siemen's patent (*C. T. J.*, 437 p. 212). The ine is utilized in any convenient way.

ufacture of Sodic Cyanide. W. M. Mackey, 32, Victoria Chambers, South arade, Leeds; and J. F. Hutcheson, 27, St. Enoch-square, Glasgow. Eng. at. 6,009. Mar. 22, 1895.

patent 6,925 of 1894 a method of making potassium cyanide is ibed. Potassium carbonate and carbonaceous matter were treated upola. The present patent refers to substantially the same pro- is applied to the manufacture of sodium cyanide, the mixture of m carbonate and carbon being acted on by a blast from specially sed tuyeres.

THE DANGEROUS TRADES COMMITTEE.

IERE has recently been issued an interim report of the Depart- mental Committee appointed by the Home Office to inquire and report upon, certain miscellaneous dangerous trades. The mittee consists of Mr. H. J. Tennant, M.P., Miss May Abraham Mrs. H. J. Tennant), Her Majesty's Superintending Inspector of ories; Mr. Thomas Oliver, M.D., physician to the Royal In- ry, Newcastle-on-Tyne; and Captain Hamilton Smith, an ctor of factories, who has acted as secretary. The Committee directed to inquire into the conditions of work as they affect the h of the operatives in the following industries and processes— rubber works; paper staining, colouring and enamel; dry ing; basic slag works and manufacture of silicate cotton; electric ating works; sole stitching by American machinery; glass ing; file cutting; bronzing and metallachrome powder in litho- ic works; flour mills; the use of converters in metal works; the f steam locomotives in factories; licking of labels for reels in thread ; the use of inflammable paints in shipbuilding yards; galvanized works; the process of dyeing with arsenate of soda; the manu- e and use of grindstone and emery wheels; the use of lead in us forms in print and dye works; the filling of bottles by ressed air; the bottling of aërated waters; the manufacture of "ending and mending" in velvet works.

pursuit of their inquiry the committee have examined 153 persons isited 134 works. Connected with the industries upon which they issue their report 103 witnesses have been examined. The com- e mention circumstances which have added difficulty to their irs and made the present report necessarily incomplete. For ple, "in their visit to Middlesbrough . . . after they had left district the reference of the committee was extended to salt works, ich there are several examples on a large scale in this neighbour- . The time at the disposal of the committee has not admitted of visiting Wales, without which they do not feel they would be jus- in making a report upon the use of converters in metal works. committee wish it to be understood that, although they believe the s with which they now deal to be chiefly in need of regulation, choice has necessarily been governed by the circumstances ibed above; they are, therefore, unable to report on other trades h may be equally in need of regulation, but respecting which their ries are incomplete."

regards the use of locomotives in factories and the use of inflam- e paints the committee is uncertain "within what limits the special can be legally applied." With reference to electricity, again—Is Home Secretary allowed by the Factory Acts to exercise his rity over electric generating works, or is he not, and where does Board of Trade come in? Electricity extends its operations daily, there are many accidents which attend its use and application. rds embracing these within the protecting arm of the State the nittee make this suggestion: they would have the words "factory rkshop" reckoned as including any sort of "premises, area, or ations" indoors or out of doors in which the work of men's hands ployed for purposes of gain, included "in any amending or con- ating Factory Bill."

ıe committee appear to have been at great pains to consider the ests of manufacturers. They have paid attention to the state of the labour market in each several industry, and to the amount and influence of foreign competition, and so far as they could they have in every way endeavoured to consider the employer, while bent on the protection of the labourer.

After a statement of general principle the report passes into details. An account is given of the conditions of labour in all the occupations enumerated above. Into these it is unnecessary here to enter. But it may be said that the report leaves a painful impression of the conditions under which many of the labouring classes live and work.

THE EXTENSION OF THE BIRMINGHAM SEWAGE FARM.

MAJOR-GENERAL Crozier, inspector to the Local Government Board, held an inquiry this week concerning the application of the Birmingham Tame and Rea District Drainage Board for permission to borrow £11,716. for the purchase of land for the extension of the sewage farm. The Town Clerk (Mr. G. O. Smith) appeared for the Drainage Board, and Alderman Baker (chairman), Alderman Clayton, Messrs. W. Harris (clerk), W. S. Till (surveyor), J. Knight, and D. Tough were also present. The Town Clerk explained that the loan was required to pay for several plots of land which the owners had agreed to sell in connection with the scheme for a large extension of the sewage farm. They hoped also to come to terms with Lord Norton for an extensive area, and there were some other owners in respect to whom a future application might have to be made for compulsory powers of purchase. The purchases now agreed upon were sixty-three acres odd from Hargraves' trustees for £6,500.; eight acres three roods from Mrs. R. J. Lowe, £875. 12s. 6d.; Rymor's cottage, £230.; Tachbrook Charity Land, eighteen acres, £1,825. 12s.; and eight acres at Curdworth, in the occupation of John Shepperd, £825. The costs in connection with these purchases amounted to £145. A further sum of £816. was required to be borrowed in respect of the costs of purchases amounting to £16,471 sanctioned on a former occasion. Evidence was given to the inspector concerning each item included in the application. In the course of the inquiry the Inspector mentioned the receipt of a letter from inhabitants of Curdworth protesting against the sewage farm being brought too close to their village. By some oversight a copy of this had not been sent to the Drainage Board, but the Town Clerk raised no objection to Mr. Lander (chairman of the Curdworth Parish Council) being heard with reference to the matter. It appeared, however, that his objections were directed towards what was feared might be the result of the further extension of the sewage farm, and not to the acquisition of any of the plots specifically referred to in the present inquiry. It was explained to him that his opportunity would occur at the next inquiry, but the Town Clerk said that the Drainage Board would be glad to do what they could to meet any reasonable objections on the part of the inhabitants of Curdworth. It was proposed that in connection with the land to be acquired from Lord Norton, his lordship should either retain a building depth adjacent to the road, or, if that was not the case, the Drainage Board would leave a strip that would be planted with trees. The Rev. Dr. Jones, rector of Minworth, complained of annoyance from the smells from the sewage farm when the wind was in certain directions, and mentioned that he was so sensitive to the smells that when he went abroad he was liable to attacks of fainting from it, and had to take a companion to pick him up. The Town Clerk expressed regret that Dr. Jones should suffer in this way, and pointed out that the remedy was in the acquisition of a larger quantity of land, and that Dr. Jones would render a service if he could induce a relative of his to come to terms for a plot the Drainage Board were anxious to obtain. The inquiry was then concluded.

WATER FAMINE AT LEICESTER.—The main reservoir supplying Leicester with water is empty, and a very grave condition exists. The Corporation have announced that unless there is a very large reduction in the consumption they will be compelled to stop the water for manufacturing purposes. The hours of service are being further curtailed, and if the supplies are cut off from factories very great hardships will ensue, as many factories will be stopped.

HINTS ON HYDRAULIC LEATHERS.—A handy little pamphlet on the use and care of hydraulic leathers and price list combined has recently been issued by Messrs. Fleming, Birkby, and Goodall, Ltd., of Halifax, and 11, Minshull-street, Manchester. In conjunction with a description of the various forms of leather packing in general use for hydraulic work, a number of hints are given on the fixing, lubricating, and maintenance of ram, pump, accumulator, and axle box leathers, &c. The different forms and applications of the leathers are clearly indicated by several well cut blocks, illustrative of the destinctive features of the various packings. The pamphlet will well repay the nominal effort of writing for and reading one. They can be had post free from the above address, or from West Grove Mill, Halifax.

Official Memoranda.

(From the Board of Trade Journal.)

CUSTOMS TARIFF OF VICTORIA.

The following is a special abstract of customs dues now payable on goods imported into the colony of Victoria :—

	Rate of Duty.
Acetic Acid, not over 30%	3d. per pint or lb.
,, for every 10% or part of 10% above 30%	1d. ,, ,,
Hydrochloric Acid	5s. per cwt.
Sulphuric Acid	1s. ,,
Carbonate of Ammonia	2d. per pint or lb.
Liquid Ammonia	*Free.*
Charcoal (Animal), ground	*Free.*
Storage Batteries and Carbons	*Free.*
Pitch (Bone and Stockholm) and Asphaltum	*Free.*
Rock Salt (Brown)	*Free.*
Candles	½d. per lb. and 1d. per lb at Jan. 1, 1897
Cement and all such products having Calcium Sulphate as a basis	1s. per cwt.
Colours and paints in oil	£2 per ton.
,, ,, ready mixed	£4 per ton.

(To be continued.)

PARA RUBBER IN CEYLON.

The *Ceylon Observer* notes that an interesting experiment in the cultivation of Para rubber is being made on the Halwatura estate in the Kalutara district. About a year ago Messrs. Finlay, Muir and Co. purchased some 50,000 plants which were planted on Halwatura by Mr. Hendry. The trees, it is said, show a surprising growth, and, like those on the Government's experimental plantation in the same district, promise well.

GOVERNMENT DYEING SCHOOL AT CREFELD.

A despatch from Mr. Martin Gosselin, Her Majesty's Chargé d'Affaires at Berlin, states that a Government chemical dyeing school has been opened at Crefeld, which has cost about £20,000., exclusive of the machinery and fabrics, which have for the most part been presented by private manufacturers. The school contains laboratories for research and educational purposes, as well as a complete collection of dyeing machinery, and an exhibition showing the result of different processes.

The establishment has been lately visited by the manager of one of the greatest dyeing works in Lyons, who is stated to have expressed the highest opinion of the institution.

THE UNDEVELOPED RESOURCES OF AUSTRALIA.

Australia abounds with the elements of successful manufacturing and other industries, which remain at the present moment, from various causes, in a neglected or undeveloped condition, especially in New South Wales, where the surroundings are of an exceptionally favourable character. Take, for instance, the flower-farming industry. The colony has been described as a floral paradise, from the abundance and luxuriance of its native and cultivated flowers, but the manufacture of *floral perfumes* and *essences* is unknown, although experimental scent farms have been established in the adjoining colony of Victoria. The quantity of *eucalyptus oil* annually exported from the colony is insignificant, yet the rich abundance of the trees from which it is obtained should enable the Australian trade to rival that of Algeria and California, whence the world's supplies are principally obtained. The abundance of citrus fruits may at some future time lead to the establishment of manufactories for the preparation of candied citron, orange, and lemon peels, as well as of *lemon, etc., oils and essences*. The crystallisation of mandarin oranges and the manufacture of orange marmalade are also coming industries; in fact, the latter has already been initiated on a limited scale. At present the chief obstacle to the development of the marmalade industry consists in the absence of the Seville orange, which could be introduced and acclimatised without difficulty.

The *olive* is very sparingly cultivated, notwithstanding the fact that the soil and climate of New South Wales are identical with those of the leading olive-growing countries of Europe. The *castor oil* plant grows luxuriantly in the humid coastal districts of the colony; as it does, indeed, in most tropical and sub-tropical countries, and in the regions bordering the Mediterranean, viz, Greece, Italy, and Spain. The annual consumption of castor oil in Australasia is over 6 gallons, of which 130,000 gallons represent the requirements o South Wales. Nearly the whole of the supply is derived from and the wholesale price of the oil in Sydney is about 2s. 6d. per The initial cost of establishing the industry would be heaviest item of machinery for expressing the oil, although the price of would also have to be considered carefully, as the Calcutta oil duced at a minimum outlay in this particular.

Flax cultivation is another neglected industry. As is well the plant not only supplies flax and tow fibre, but also a valuabl of the greatest use as a fodder for cattle, in the form of oil cake, o it forms the chief ingredient; also for medicinal purposes; and all, *linseed oil*, which forms the base of all paint mediums. *Co oil* is imported to some extent, although it could be locally ob the cotton plant being capable of easy cultivation in many *Indigo* can also be readily grown, and there is in the colony plant, so abundant as to be a pest, from which it is hoped a ti juice might be obtained, but experiments have hitherto prov successful. The true plant which supplies the indigo of co occurs wild in Queensland, and there is no reason why it should acclimatised in New South Wales, experiments in this direction having proved successful.

Parliamentary Jottings.

THE POLLUTION OF RIVERS.

In the House of Lords last week, Lord Norton asked Her M Government if they would undertake the legislation which in cases had been prepared by the County Councils Associati which in private hands has failed for several sessions to obtain t discussion. The noble lord stated that this proposed legislati simply to make general the powers already successfully given i local Acts for accelerating the prevention of pollution of rivers. only way to deal successfully with this evil was to enable councils to combine for the exercise of the powers conferred Mersey and Irwell and the West Riding of Yorkshire Acts.

Lord Thring remarked that the evil referred to by the no could not be exaggerated, but the difficulty of dealing with i the existing Rivers Pollution Act arose from the fact that un Act the requisite works must be carried out in such a manner a interfere with the manufactures of the district, and under the tw Acts mentioned the difficulty had been surmounted in Lancash Yorkshire.

After some remarks from Lord Clifden,

Lord Harris regretted that he was not in a position to promi the Government would do what the noble lord requested. T noble lords who had addressed the House seemed to think tha lation making general the powers given by the Mersey and Irw West Riding Acts would be a very simple matter; but the fa that a bill with that object had been introduced into the H Commons this session, but had been blocked by no fewer th members on both sides of the House. It was clear, therefor legislation on this subject could not be of a non-contentious ch and under these circumstances Government could not pledge selves to undertake it next session. All he could promise was t suggestion of the noble lord would not be lightly passed over Local Government Board.

THE FERTILISERS AND FEEDING STUFFS ACT.

In the House of Commons, Mr. Herbert Lewis asked the Pr of the Board of Agriculture whether, during the two years in the Fertilisers and Feeding Stuffs Act, 1893, had been in operat nine counties only one analysis had been made, and in twen counties there had been no analysis; and what steps he prope take to prevent the Act from being a dead letter in the c referred to.

Mr. Long said the facts were as stated in the question. Sin passing of the Act, the Department had addressed various c letters to the local authorities, calling attention to its provisio making various suggestions in regard to its administration. Department had also issued many thousands of a leaflet expla of the procedure to be adopted by buyers who wished to put t into force. He would be happy to consider further suggestions, must be with the buyers themselves to determine whether they avail themselves of the machinery for sampling and analysis au by the Act.

EXPORT DUTY ON SULPHUR ABOLISHED.—Reference was some little time back to the intention announced by the Italian G ment of removing the duty on sulphur, and it now appears th Italian Senate passed a Bill on Saturday last abolishing the duty on sulphur.

Reports of Companies.

THE ROBURITE EXPLOSIVES COMPANY.

The report of the Directors of this Company, for the year ending 31st December, 1895, says :—The Directors lay before the shareholders the acounts for the year 1895. They have delayed doing so up to the present time on account of the legal proceedings which have been forced upon the Company during the last eighteen months. The circulars and newspaper reports which the shareholders have received have put them in possession of all the particulars of these proceedings, terminating in the unanimous judgments of the three judges of the Court of Appeal in favour of the Company. Nevertheless the Lancashire Explosives Company have presented a petition of appeal to the House of Lords. As judgment on this appeal cannot be rendered for some months, the Directors have determined to call the meeting without further delay. In view of the litigation, they convened early in March an informal meeting of a considerable number of the principal shareholders and obtained their approval of the postponement of the general meeting, and at the same time these shareholders nominated three of their number, Messrs. Arthur Egginton, C. Ridley Smith, and Hammersley Heenan, to act as a consultative committee with the Directors. The Directors will propose to the general meeting the confirmation of the appointment of this committee. The accounts show a balance of £2,658. 0s. 8d, subject to the damages and costs of the litigation. These will have to be included in the accounts for the current year, and as soon as the appeal to the House of Lords is disposed of the Directors propose to discuss and settle with the committee the best mode of dealing with the debit balance thus created.

CONSOLIDATION IN THE AMERICAN SODA TRADE.

THE consolidation of the firms of Church and Co. and John Dwight and Co. has been formally concluded by the filing at Albany, U.S A., of articles incorporating the Church and Dwight Co., whose purposes are to manufacture and sell bicarbonate of soda, sal-soda, and carbonate of soda, in all its forms The principal business offices of the company will be in Solvay, Onondaga County, and the capital is 2,000,000 dollars. The directors are John Dwight, John E. Dwight, William I. Walker, E. Dwight Church, James A. Church, and E Dwight Church, jun , of New York city. John Dwight and Co. enjoy the distinction of being the pioneer manufacturers of bicarbonate of soda in the United States. In 1846 John Dwight began the manufacture of this article and soda saleratus at the foot of West 25th-street, New York, thus opening up a new competition to the domestic pearl-ash saleratus and the imported bicarbonate of soda. The latter was but little used, but the pearl-ash saleratus had a very extended sale in this country, and it required a long, persevering, and plucky effort to convince housekeepers that the new article was so much superior in strength and cheaper in price as to merit their preference. In this he was aided somewhat by the steadily advancing cost of pearl-ash, owing to the destruction of the forests from which the raw material was obtained. In 1847 Mr. Dwight formed a co-partnership with John R. Maurice, which was continued until 1881, when the latter retired from business, and Mr. Dwight continued alone until 1883, when his son, John E. Dwight, was admitted to partnership, and in 1886 William I. Walker became a member of the firm, the *personnel* of which has not since changed. The old factory at West 25th-street was given up in 1868 for a new and larger one on the site of the present extensive works at First-avenue and 112th-street. The firm owns very valuable trade-marks, its "Cow Brand" of bicarbonate of soda being one of the most profitable in the country. The business is of very extensive proportions, and the firm's name has always been regarded as a synonym of integrity and progressiveness.

The firm of Church and Co. was formed in 1867 by Austin Church and his sons, the late James Austin Church and E. Dwight Church, who is the only survivor of the original co-partnership. The senior had previously been engaged in the manufacture of bicarbonate of soda in a small way at Rochester, and his knowledge of the practical side of the business, coupled with the business capacity of his sons, soon gave the concern a prominent position among American manufacturers. The present partnership consists of E. Dwight Church, James A. Church (son of the late James A Church), and E. Dwight Church, jun. The small factory established in 1867, with 18,000 feet of floor space, has grown to a plant affording more than seven acres of surface room. These works are at Greenpoint, Brooklyn, and constitute a very valuable piece of property. The firm has manufactured bicarbonate and sal-soda, but its leading specialty is the "Arm and Hammer" brand, which has gained a very high reputation and become a most valuable trade-mark. The firm also owned the alkali works at Trenton, Mich., the closing of which some time ago was thought to portend some movement looking toward their transfer to other interests.

As will be readily appreciated by every one familiar with the business of these concerns and the established character of their various brands, the consolidation is an important one, and the significance of the fact that its principal place of business is to be at Solvay, Onondaga County, will be understood. To what extent the operation of existing plants will be affected by the consolidation and the amalgamation of interests with those of Solvay people, is, of course, not known, but it is certain that the standard of the products of the two firms will be fully maintained, and the value of their trade-marks will not be permitted to diminish through lack of pushing.

MANUFACTURE OF DYE EXTRACTS IN INDIA.

THE Indian Forest Department is turning its attention to the question of preparing tannin extracts for the general trade. Several years ago, when the Calcutta Government resolved to embark upon the manufacture of leather for boots and accoutrements, an officer was detailed to enquire into the material locally available for purposes of tanning. He discovered that a large number of trees in different parts of the dependency were used by the natives for the extraction of tannin and dyestuffs, but the general drift of his report was to recommend that in some particulars the Government tanyards should be content with imported materials. An expert has, however, been lately turning his attention more to this problem, and has given such particulars as to encourage the Forest Department themselves to consider the propriety of setting up in business as makers of the extracts. The matter deserves the prompt attention of all concerned, because it may not only involve a curtailment in the English imports of hemlock and other extracts from Europe and the United States, but may also tend to diminish the popularity of the coal-tar dyes, whose inferiority to vegetable products is in some ways manifest to the Yorkshire woollen man.

THE NITROGEN CONTENT OF COAL.

IN a communication by J. Landin to the *Teknisk Tidskrift* as to nitrogen and its combinations in the distillation of coal, he remarks that, in connection with the coking of coal or distilling it for gas making, the chief point is naturally to determine the carbon and hydrogen contents, in the latter of which cases the greatest possible amount of carbon is combined with hydrogen in the form of gas, and in the former the object is to obtain the carbon in solid form as the residue of distillation. At the same time, however, the nitrogen content is of still greater importance ; and though this is very slight, it still plays a very important part, seeing how immense are the quantities of coal that are now burnt. The nitrogen content varies within wide limits for the various kinds of coal ; and it may also vary greatly in one and the same description. Westphalian and some English coals, for instance, generally contain from 1·3 to 1·6 per cent. of nitrogen, while certain other classes of coal contain less than 1 per cent. of this gas. According to Dr. Knublauch, the proportionate content of nitrogen in the various products of coal is as follows, for two samples of Ruhr and one of Saar coal :

	Ruhr.	Ruhr.	Saar.
Coke	30	35·6	63·9
Gas	55	47·1	16·1
Ammonia	11·9	14·1	15·9
Cyanogen	1·8	1·8	4·1
Tar	1·3	1·4	

With respect to Westphalian coal, the author concludes as follows: "In coke there remain behind about 50 per cent. of the nitrogen ; and in gas about 30 per cent , which is considered disadvantageous, as it diminishes the illuminating power. In ammonia from 12 to 14 per cent. are found, corresponding with 10·4 kilog. (22 lbs.) of ammonia sulphate per ton of coal ; and lastly, in tar, nitrogen bases to the extent of 1½ per cent. are found, corresponding with 0·02 per cent. of the coal. The author concludes that, at the outside, from 0·2 to 0·25 per cent. of the nitrogen contained in coal passes over into valuable by-products, which can be so utilised that an additional profit of about 10,000 marks (£500.) may be made out of 1,000,000 cubic metres (35,316,580 cubic feet) of gas.

SALT SHIPMENTS.—According to Mr. Falk's circular there was a decline in the shipments of salt from the Mersey for the first six months of 1895 of 51,000 tons, or 15 per cent., as compared with the corresponding period of 1895. The markets which have contributed mainly to this disappointing result are Calcutta, Burmah, and the United States of America, the latter showing a decline of nearly 10,000 tons, and the East Indian market a loss of 33,819 tons.

THE GERMAN PETROLEUM FLASHPOINT STANDARD.

By Mineral Oil.

THE following are some notes from German official documents, difficult to procure, which show how the German standard came to be lower than the English. The first official paper in connection with standard of flashpoint in Germany is a report from the Imperial Health Office, Berlin, 1880. Its object was to prepare a foundation for regulations. It proved first of all that the danger of petroleum is best gauged by taking the flashing or firing point, and that methods founded on the vapour tension or on measurement of quantity of vapour evolved (such as Professor Dewar recently showed the Committee) were of no value for estimating the comparative danger of different oils. The Health Office then compares the different methods of taking flash and firing points—the old English open test, the Danish, Saybolt, Granier, Tagliabue, Bernstein, Engler, Abel, etc., etc.—20 different apparatus in all. It reported that Bernstein's or Abel's should be adopted, and recommended that on no account should the standard be fixed lower than the standard in England (73° F., Abel test), as there was danger that oil rejected as dangerous in England might be sent into the German market. Little was known of the facts of the case, and the standard fixed by England evidently carried great weight. There was no suspicion of course on the part of the Health Office that the English standard had been arrived at by a mistake (as it really was), viz, through fixing the standard with one apparatus and then adopting another in the Act without altering the standard to suit; but the Germans, with their ordinary thoroughness, avoided this elementary error, and saw clearly that when a standard was fixed it must be with a definite apparatus.

The next paper is a shorthand report of a three days' palaver (October 26th, 27th, and 28th, 1880) of scientists, merchants, and others interested, convened to select a test apparatus; but they also discussed the standard. The Director of the Health Office, Dr. Struck, was in the chair, and among others present were Professors A. W. Hofmann, of Berlin, Weber, of Charlottenburg, Engler, of Karlsruhe, and merchants from Chambers of Commerce, etc.—20 in all. As knowing most about the trade, the merchants were asked to give information and opinions; and it is beautiful to see the childlike faith with which all present received from the merchants the American manufacturers' facts and figures. The merchants practically controlled the proceedings throughout. They argued that as 120° fire test oil (=73° Abel) is one cent per gallon dearer than 110° fire test (=70° Abel), the standard of 120° would give four million marks additional cost to Germany on its consumption, and that if all were to be made 120° for Germany the increase would be more than that. They thought that 120° test oil would require costly arrangements in America, and that probably the extra cost to Germany would be 12 million marks. They argued (quite correctly) that 120° is practically no safer than 110°. Also that Austria lost all its continental trade through Trieste by adopting a standard higher than the rest of Europe, and that England lost all its continental trade when it adopted its present standard. It was stated on Mr. Redwood's authority that England had adopted such a high standard to protect the home manufacture. The Health Office officials said that the standpoint of natural laws must not be disregarded; that the temperature in lamps as given by Professor Victor Meyer, then of Zurich, demanded a standard of over 36° C. (97° F); but although Dr. Sell went to the length of saying that the standard should give a sure protection at all times, summer as well as winter, this by others was looked on as extreme, and no one, after what the merchants said as to increased cost, durst propose a standard in conformity with the demands of science. Throughout it was only a question of 120° or 110° fire point. Professor Hofmann demanded proof that the English standard was higher than necessary, but Professor Weber, who had experimented, proposed that 110° fire be recommended. The Abel test was adopted. The sittings ended by the merchants expressing thanks and surprise—which no doubt was very genuine—that their demands had received so much consideration.

We next have a report from the Imperial Health office, dated July, 1891, giving experiments which they undertook to fix a proper standard with the Abel test, carried out, however, *under the Government injunction that they were not to fix the standard higher than in England.* The scientists were no longer free to argue for true safety, but had to become special pleaders to justify the position the Government had definitely taken up. They made experiments to determine the point most in conformity with sanitary interests, which also conformed with this injunction. They gave the science of the question quite correctly, although they ignore its teaching. They stated that the danger of petroleum is from its volatile ingredients, and the lower the flash point the greater the danger. The only danger they *investigated*, however, was one recognised now to be comparatively insignificant, *viz.*, the danger of true explosion in the lamp. They say that after determining the average temperature in lamp reservoirs, in dwellin easy to fix a safe standard; but they don't do it. They men Chandler's experiments on heat of burning, etc., but as they experiments which gave no explosion, and this in spite of son tional carelessness, they concluded that the English standard than is necessary. They tried to get explosions in little v 190 cc. capacity, with driblets of oil; also in vessels of 350 c 20 cc. of oil, and they found the explosion point 10° C. a Abel flash (afterwards corrected to 8°). The quantities of oil capacity of the vessels were far too small for getting an appro to the truth. But under their injunction they are as easily sa an expert would be if engaged by the S O.Co. They tried e in lamps and found them to explode 3° C under the flash poi they ascribed to distillation from the bottom plate, not kno decrease of flash point by increase of the quantity of oil. that explosions are often laid to the construction of the lamp, showed that *it is much oftener the oil that should be blame* acknowledge that if oil were all high flash it would obviate al but they were under wrong impressions as to the use of na making oil rise in the wick and burn without smoking. "Lim selves, therefore, to high-test oil is neither practicable nor and we *allow* oils as safe, which, at *not unusual temperatur* air, are safe *when properly handled*, and when burned in *constructed* lamps, *properly* managed." (The italics are our show no mercy for the ignorant poor; nothing is considered ba venience of the manufacturer, and the requirements of the me

(To be continued.)

PINTSCH PATENT UPHELD IN GERMA

DURING the last few months, incandescent gas lighting the subject of much litigation in the law courts, last taken place at home is comparatively small as compared litigation in Germany, where the holders of the Welsbach pa fighting the large number of competitors who have sprung the last year or so. A further step in the elucidation of the patents has now been made, the "Nichtigkeitsabteilung German patent office having just given its decision in connec the application of the Continental Gasgluhlicht Gesellscha for the nullification of the Pintsch burner patent (No. 43,991 the German Incandescent Gas Light Company. The applic refused, the validity of the patent being upheld.

BRITISH INSTITUTE OF PUBLIC HEA

THE annual meeting of this Institute was held at Glasgow the meeting having been opened on Friday, July 24. Vari were read in the Chemical and Engineering section, unde sidency of Prof. Ramsey. Among the more important were t by Mr. W. Brown, of London, on "Chemical Sanitation an Health," which dealt mainly with a process of sewage treatm ing at Sutton, Surrey; and Mr. A. E. Fletcher on the "P the Atmosphere by Coal Smoke." Dr. J. B. Readman, E read a paper on "The Treatment of Peaty Water in a Reserv said that the treatment to be described was not new, on th was well known; but what was possibly new was the attempt water highly coloured by peat in a large public reservoir, and while a large area of population was being provided with w 1895 a large reservoir, occupying 113 acres, was constructe County Council of Linlithgow. It was situated on the high about two miles on the main line between Airdrie and Bath was about 1,500 yards long. The Forrest Burn ran through catchment area was large. It was found necessary to de reservoir and to cut through peat. When water was introduced last it was highly coloured, and the people declared it und Samples were sent to him for analysis, and after some troul allowed to make an experiment. He gradually introduced different points, and soon found that the action of the alum w cipitate brown peaty matter, and in a very short time the wat clarified as to be even clearer than that supplied to the city burgh. About 60 tons of alum had been applied to bring result; and it might be found necessary, under certain cond add a little alum at different times.

PRICE'S PATENT CANDLE CO., LTD.—Subject to audit, a out making any deduction for depreciation, the account company for the half-year ended June 30 last show a profit £37,800., and the directors propose the declaration of a div 16s. per £16 share, absorbing £30,000.

Correspondence.

We do not hold ourselves responsible for the opinions expressed by our correspondents.

THE PETROLEUM INQUIRY.

(To the Editor of the Chemical Trade Journal)

IR,—I have read with very much interest the article in your issue he 11th inst., and also the letters of Mr. Hurst and "Pro Bono ilico" in that of the 18th, on the Petroleum Committee.

is not an easy matter to forecast what the results of the deliberas of this Committee are likely to be, or, indeed, if they will have real practical recommendations to make. One is inclined to think many of the members have already got their minds made up and views formed, and are now only seeking to strengthen these ions by sifting out from the witnesses just such information as suits n, and leaving the rest entirely hidden. This does not appear to he way in which such an inquiry is meant to be conducted, and would naturally think that the information elicited at such a ld be both disinterested and unbiassed. Instead of that, we find rts coming up, contradicting and refuting each other right and until everyone is so confused that it may safely be said, "'E no where 'e are."

appears to me, Sir, that the real question is being entirely lost t of, and buried up under the mass of confusion which is being l over it. Many of the witnesses can only answer yes or no to nple question, to the accompaniment of a five minutes' explanation, ch in the end makes one wonder which of these two simple words intended to be used.

he principal point to be thoroughly cleared up is this:—Does the -point (Abel test) indicate the point of incipient danger in a burning If it does not, then what is the value of it? But if it does (and not see on what grounds it can be denied), then what is the er temperature to fix as the minimum legal standard in this try? Climatic conditions must take the first place of importance eciding such a point. It is, however, not sufficient to take the n average temperature of so many years in order to arrive at a factory conclusion. It is necessary to take the highest temperatures ch are to be found in badly ventilated houses. If that is done, and 10° 5° added for the heat developed in burning, then it will be seen 100°F. is the very lowest temperature that can be fixed upon as a mum flash-point. A Russian expert witness stated that he thought sh-point of 85°F. to 87°F. was quite high enough for perfect y, but, on cross-examination, he admitted that oils flashing at these eratures could be made in Russia without any additional fractiona- or cost. It is not hard to see how his opinions of the safety point formed. The same gentleman also advised the use of very high -point oils in theatres, churches, halls, and other public buildings. ld he not have added private houses and shops, and thereby ered himself consistent? But consistency is not the *forte* of the cates of low grade oils. They admit the necessity of a stringent to regulate the carriage, storage, and use of naphtha on account of langerous properties, and, presuming upon the ignorance of the mittee, they say that the danger vanishes when it is mixed to the nt of 30% with burning oil. As they are gentlemen professing ntific knowledge, the committee should insist upon a scientific anation of this statement. As well might it be said that whiskey ld not come under the law when diluted with a high percentage of r.

any able and disinterested witnesses have given strong evidence, orted by arguments and facts, showing that a low flashing oil is gerous even in the best constructed lamps, and in the hands of care- nd well-disciplined persons. This much has been admitted even he advocates of low grade oil during cross-examination, although, eir evidence in chief, they have affirmed that in point of safety e is no difference between a high and a low flash-point oil. Sir lerick Abel, when hardly pressed, stated that he recommended a flash-point oil for Government departments on account of ger of storage in barracks, and the carelessness of soldiers. When ade this statement he surely must have forgotten that oil has to be d in towns and villages, and is handled by men, women, and lren, who may be supposed to be more careless than disciplined iers. He did not tell if it was the frequency of accidents in acks that made him recommend the use of high-grade oil, but if it he certainly found a most effectual remedy, for we hear nothing of accidents happening in barracks now. Why, then, not use the e means for the safety of the public?

ome experts have affirmed that if petroleum was rendered safe by abstraction of the necessary proportion of its naphtha it would no er burn; but, strange to say, it burns in America, in barracks, and any other places besides, and whilst it has been demonstrated that amount of naphtha that would require to be abstracted, so as to raise the flash-point to one of comparative safety, is merely a fractional quantity, insufficient to affect the quantity or price of petroleum imported into this country. The experts already referred to make no scruple of declaring that it would lessen the quantity of petroleum by 30% and raise the price by about 50%. This can only be characterised as "bosh," and as a statement made by scientific gentlemen is sufficient to cast doubts upon either their honesty or their knowledge.

A suggestion was made at one time—I am not sure what was the source of it—but it was to the effect that all oils sold, even in bottles, should bear a label stating the exact or guaranteed flash-point, Abel test. The suggestion is worthy of consideration, and, whether or not, it is highly desirable that the public should know the character of the article they are purchasing, so as to enable them to judge of the danger they are incurring. In a similar manner the public are protected by the Food and Drugs Act and the Margarine Acts, and there seems no good reason why they should not be guarded against the use of an article far more dangerous than margarine or reduced whiskey.—I am, etc.,

G. J. R. A.

July 28th, 1896.

LAGUNAS NITRATE COMPANY.

MR. H. W. Low presided the other day at a meeting of the shareholders, held at Cannon Street, London, and stated that at a former meeting pressure was brought upon the board to bring new blood upon the directorate, and he and others were appointed in that capacity. It naturally became their duty to make themselves conversant with the whole position of the company. They had sifted all matters, and had digged down to the foundations upon which the company was built. A report had been presented to the shareholders as the result of their investigations. This gave some particulars as to the maladministration of the company, and made a demand for an explanation of the errors made in the prospectus. Having taken advice, it was advised to take proceedings against the syndicate, the original directors of the company. The meeting was called to place matters fully before the shareholders. The key to the whole matter was found in the fact that the vendors of the property and the original directors were the same parties, and consequently acted in a dual capacity. He urged that there was a strong case for investigation, and went on to accuse the late Colonel North and others of misrepresentations in the prospectus. At this there was some interruption. The Chairman said the colonel had received one-half of the profits derived by the company — A shareholder thereupon rose, and in an excited manner asserted that this was a reflection upon a dead man, and urged that the chairman should be no longer heard unless he withdrew the objectionable remark. At this there were loud cries of "Withdraw, withdraw."—Another shareholder approving the words of the chairman, said he should, in his place, have used a much stronger word. He considered it was a "downright robbery." (Great noise.)—The Chairman declined to withdraw, and went on at great length to further impeach the original directors, stating that mountains had been made out of molehills. He moved a long series of resolutions, to the effect that the board be authorised to continue the action commenced against the Lagunas Syndicate (Limited), 1889, and its liquidators, and reposing no longer confidence in the former directors of the company; also that the board be authorised to employ agents to proceed to Chili or to remain in England, for the purpose of elucidating the accounts and position of the company.—Mr. Porlitz seconded the resolutions, and a long discussion ensued.—Mr. Robert Harvey, an original director, made a speech, in the course of which he emphatically denied any misrepresentation, and warned the shareholders against entering upon a lawsuit on the advice of the chairman and his coadjutors. At the time the prospectus was issued, he said there was every reason to believe that the representations made would be carried out. There was no intention to cheat; and, besides defending himself, he had to defend the memory of a deceased man. (Hear, hear.)—The proceedings were protracted, but the resolutions submitted by the directors were carried by a large majority.

STOPPAGES IN THE COAL TRADE.—Two large collieries at Radcliffe, near Manchester, belonging to Messrs. Fletchers, which employed 400 men and boys, have, it is stated, been closed. The Bridgewater Trustees, the largest firm in Lancashire, have also closed four of their mines in the Manchester and Bolton districts, and a considerable number of men have been thrown idle. The Trustees have been gradually reducing the number of men employed at all their collieries. An important announcement was also made on Saturday at the extensive collieries of the Grassmoor Coal Company to the effect that the company have decided to close one-half of their Tupton pits in Derbyshire. Nearly one thousand men will be affected directly and indirectly, and the notice has caused much consternation.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Mr. C Ford, gives the following returns of the exports of petroleum and petroleum products for June, 1896. The total shipments were 79,116,959 gallons, compared with 68,872,157 gallons in June, 1895. The total for the twelve months ending June 30th, 1896, was 880,354,125 gallons, against 875,656,144 gallons during the same period in 1895. The details of the shipments are as follow:—

			CRUDE PETROLEUM.	Gallons.
Total,	June,	1896	.....	6,787,715
,,	,,	1895	.....	11,927,590
			NAPHTHAS.	
Total,	June,	1896	.....	845,003
,,	,,	1895	.....	1,057,951
			ILLUMINATING.	
Total,	June,	1896	.....	67,296,955
,,	,,	1895	.....	52,385,579
			LUBRICATING AND PARAFFIN.	
Total,	June,	1896	.....	4,186,320
,,	,,	1895	.....	3,498,087
			RESIDUUM.	
Total,	June,	1896	.....	966
,,	,,	1895	.....	3,150

Trade Notes.

NEW AMERICAN SULPHUR COMPANY.—The United States Sulphur and Chemical Company has been incorporated in West Virginia with a capital of $500,000. in 100,000 shares, of a par value of $5 each, to work the deposits of sulphur in El Paso County, Texas.

GAS LIGHT AND COKE COMPANY.—The report for the past half-year shows that, after providing for all fixed charges, there remains a balance of £474,711., out of which the directors recommend a dividend at the statutory rate of 12¾ per cent. per annum, carrying forward to the credit of the current half-year the sum of £108,898. The quantity of gas sold during the half-year has been 9,852,694 thousand cubic feet.

BOVRIL (LIMITED).—The report for the year ended June 30th states that the nett profits amounted to £88,120. The directors recommend for the last half-year a dividend at the rate of 20% per annum, tax free, making, with the interim dividend paid by the old company on Jan. 31, a total distribution of over 13% for the year on the increased capital. They further recommend that £25,000. be employed to open an account termed "reserve of undivided profits," such reserve to be available for equalisation of dividends or otherwise as may be agreed upon, and that £2,000. be reserved for the payment of income tax. The balance to be carried fotward will be £2,921.

PROFESSOR CROOKES AND THE RONTGEN RAYS.—An American friend of Professor Crookes now attending the Chemists' Congress at Paris relates, says the *Daily News* correspondent, how narrowly the Professor missed discovering the X rays. Some time previous to the discovery the Professor had set a plate before a Crookes tube and left it there. When he next looked at it he saw a dim form. He thought the plate was dirty, and sent it to be cleaned. This was done, and after it had stood again before the tube he noticed the same shadowy appearance. He was annoyed, and sent it back to be cleaned again. As he was very hurried, having booked a passage to the Cape, he had not time to try a third time, and thus lost his chance of forestalling Professor Röntgen.

SAMUEL ALLSOPP AND SONS, LIMITED.—The report for the year ended July 30, 1896, states that the accounts show a profit of £266,297, as against £189,838 in the preceding year. The payment of £53,300. as the interest on the debenture stock reduces this amount to £212,997., which, with £3,277 brought forward from last year's account, leaves £216,274 available for share dividend. The dividends on the preference stock (amounting to £66,000.) and an interim dividend of 3 per cent. on the ordinary stock (amounting to £33,000) were paid in due course, and leave a sum of £117,274. available for further distribution. The directors, therefore, propose (1) to pay £33,000, or 3 per cent., to the holders of ordinary stock; (2) to place the sum of £80,000. to the reserve, thereby bringing it up to £110,000.; (3) to carry £4,274. to the next year's account. Although the borrowing powers, which by the articles of association are limited to £1,500,000., are not yet exhausted, the directors are of opinion that the margin of borrowing powers should be amplified, and they have accordingly decided to ask the stockholders to sanction an increase of the present powers so that the total amount shall not exceed the nominal share capital of the company for the time being issued.

CHARCOAL AS AN INSULATOR.—The Cartvale Chemical Co., L of Paisley, send us a neatly got up booklet on the advantages efficiency of their flake charcoal as a packing for refrigerating cham Their claims are supported by experimental *data* which show that do not make assertions based on unjustifiable assumptions. On contrary, after reading the particulars which are given, it is har get away from the admission that flake charcoal appears to b insulator *par excellence* for cold storage work. The information v is put forward will prove of interest to all connected with refriger

ANOTHER CHEMICAL CO.—The Langloan Iron and Chemical pany, Limited, with a total capital of £200,000, made up of 12 shares of £1 each and £75,000. of 4½% mortgage debentures, has formed for the purpose of acquiring and working the Langloan furnaces, and of erecting and working in connection therew chemical plant for the recovery of ammonia and other valuabl products from the blast furnace gases. The vendors have agreed t the properties at the price of £80,000., to be paid £15,000. in £25,000. in debentures, and £40,000. in fully-paid shares. Th naces are at present out of blast, and, as it may take nearly a y complete the alterations and additions and to have the works working order, the vendors will deposit in the hands of the debe trustees a sum sufficient to provide the interest which may accr the debentures up to July 31, 1897. The vendors will also dep sum sufficient to pay the interest at the rate of 4% per annum July 31, 1897, on the amount which may be called and paid up p that date of the £85,000 of share capital now offered for subscrip

CONGRESS OF APPLIED CHEMISTRY.—M. Berthelot opene second International Congress of Applied Chemistry at Pa Monday. His inaugural address was of considerable length dealt at first with a number of obvious points, and enlarged future of synthesis. In dwelling on the astounding results alliance between chemistry and physics, he discussed the problem of light, and had some curious things to say on acet which, however, he said, was even 30 years ago one of the co of chemical synthesis when it was formed by the direct union of and hydrogen in the electric arc. By far the most important an gestive portion of M. Berthelot's speech, however, was that in wi insisted on the difference between the modern era of applied during the last three-quarters of a century and the whole develo of the race during the last 6,000 years, a difference so marked new man was being created in a new earth and the entire organisation was being transformed amid conditions for the comp sion of which the past offered no suggestive precedents or *data*. the continuous intervention of science is an unprecedented human history is a point to which the great chemist again and reverts, and it is in developing this idea that he is most eloquent.

THE RESIN MARKET.—In their monthly report on the resin Messrs. F. S. Chiesman and Co., of London and Liverpool, s common descriptions have maintained their position, and ther appears no prospect of a fall in prices. The medium grades a ported not only by the firmness of the market for the common but by the extremely strong demand for them all over Europe. however, still a question whether the relatively low price and receipts of "pales" will force down the prices of the lower Meanwhile, it is pointed out that the soap trade in the United is in an unsatisfactory condition, and that even this branch of in and trade is likely to continue unsettled until the impending Am elections are over. In the London resin market a fair trade ha done recently both in supplies on the spot and for forward de Practically all the imports into London during the past month been sold before arrival, and stocks are steadily decreasing. Th indeed, a prospect of an advance in prices on account of scarcity June 30 the stock in London was 10,786 barrels, as against barrels at the corresponding date last year. About half the st present in London is held at public wharves by consumers, and for sale. The Liverpool market has been flat, with very little bu Low grades continue to command fair prices on the spot, but both descriptions and "pales" are quoted easier for shipment.

NOTICES.

LONDON AGENTS

Booksellers and Newsagents may now obtain supplies of

"THE CHEMICAL TRADE JOURNAL"

From

MR. JOHN HEYWOOD,

2, Amen Corner,

Paternoster Row, E.

On usual trade terms.

FOREIGN REMITTANCES.

Owing to the inconvenience created by the various ways in which foreign subscriptions are remitted, we respectfully beg to inform subscribers that a *Crossed* MONEY ORDER is the most satisfactory method of remitting, both for them and ourselves. In the case of a Money Order, a letter advising us of same should always be sent, otherwise, owing to post-office formalities, much delay in tracing and acknowledging foreign remittances is inevitably entailed in this country.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are firm, though the inquiry has relaxed a little, 90's being quoted the same as last week for spot, and Aug.-December, 3s. 6d. to 3s. 7½d.; Jan.-June, 3s. 3d. For 50/90's forward, 2s. 6d. to 2s. 7½d. is being asked. Carbolic acids are firm, at 2s. 2d. for 60% crude, and 7¼d. for 40% crystals. Solvent naphtha is in good demand at 1s. 4d., and crude, 10d. Creosote and anthracene unaltered. Pitch is so far unchanged, at 32s., f.o.b. East Coast, but it seems rather unsettled.

Sulphate of ammonia is weak and unreliable. Second hand parcels have changed hands at prices detrimental to the recovery of the market. Nearest values are: London outside makes £8., Liverpool £7. 18s. 9d, Hull £7. 17s. 6d., and Leith £7. 15s.

REPORT ON MANURE MATERIAL.

The market has been quiet, and there has not been much business passing. The quotations for mineral phosphates are unchanged, and no important transactions are reported either for continent or for U.K. There would be buyers of River Plate bones at £3. 12s. 6d. per ton, delivered U.K., but there are no sellers at the price. Bombay bone meal again offers at £3. 15s. per ton, for shipment, and this price would also do for fine Kurrachee. There is nothing doing in crushed Kurrachee bones, shippers still requiring prohibitive prices. Nitrate of soda is a shade quieter. There is less buying of cargoes in the forward position; but, on the other hand, sellers maintain a firm attitude, and prices are not quotably changed. On spot 8s per cwt. is required for fine quality, though 7s. 10½d. would be accepted for inferior test. There is nothing to report in miscellaneous material.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed at 45s. 10½d.; Middlesbrough 36s. 8½d. cash, and hematite 46s. 8d. Copper, steady: Chili bars, G. O. B.'s and G. M. B's., closed at £48. 10s. to £48. 15s. cash, and £48. 7s. 6d. to £48. 12s. 6d. three months. Tin, steady: Straits closed at £60. to £60. 10s. cash, and £60. 11s. 3d. to £61. 1s. 3d. three months; Australian, £61. 5s.; English ingots, £64. 10s. Lead: Spanish, £11; English, £11. 2s 6d. to £11. 3s. 9d.; Silesian spelter, ordinary, £17. 12s. 6d. Nickel, 1s. 2½d. Antimony, £29. 10s. to £30. Quicksilver: First hands, £6. 7s. 6d.; second hands, £6. 7s. *Copper shares*, steady: Cape, 2⅛ to 2⅜; Copiapo, 2½ to 2⅝; Libiola, 2⅝ to 2⅞; Mason and Barry, 3⅛ to 3⅜; Rio Tinto, $23\frac{11}{16}$ to $23\frac{13}{16}$; Tharsis, 5⅜ to 5⅝.

GLASGOW, WEDNESDAY.—Market again easier, with small business. Scotch done at 45s. 11½d. and 45s. 11d. cash, also at 46s. 1d. and 46s. 0½d. one month; closing with buyers at 45s. 10½d. cash, sellers ask 45s. 11d. Cleveland done at 36s. 10½d. one month; closing with buyers at 36s. 8½d. cash, sellers ask 36s. 9d. Cumberland hematite done at 46s. 8½d. cash; closing with buyers at 46s. 8d. cash, sellers ask 46s. 9d. Middlesbrough hematite closes with buyers at 44s. 3d. cash, sellers ask 44s. 4½d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade a fairly steady business continues to be done in all the leading products. Bleaching powder is moving more freely for export at the lower rates. Spot quotations for home trade are £6. 15s., o.r. maker's works. Caustic soda is unchanged in any position, ending as follows: f.o.b., Liverpool, 77%, £9. 7s. 6d; 74%, £7. 7s. 6d.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. net per ton, 10-ton lots and upwards. For alkali, 58%, there is less enquiry, but price is unchanged at £3. 7s. 6d., bags, f.o.r. Soda crystals, 35s. per ton. The market for sulphur remains firm, and with an advancing tendency, price being £4 f o r. Chlorates are rather easier: potash 4⅜d. to 4½d., and soda 5¼d. per lb. Sulphate of copper is a steady market at £16. 15s f o b. Arsenic in short supply at £22. 10s. to £23., Garston. In brown acetate of lime there is no movement, and price remains at £4. 2s. 6d. to £4. 5s., ex quay; grey, £8 10s. to £8. 15s. per ton. White sugar of lead unchanged at £22. c.i.f. Acetate of soda steady at £14. 10s; other acetates and acetic acid quiet and values unaltered. Potash, caustic and carbonate, are in fair request, and supplies are not abundant, carbonate 90/92 %, £18; caustic 90 %, £24 10s. nett. per ton. Yellow prussiate of potash, 7d. per lb., and a quiet market thereat. Cyanide, 1s. 1½d. Sulphocyanides in small demand and without improvement in prices. Nitrate of soda remains steady at 7s. 10½d. for spot and forward parcels. Ammonia salts steady and no important alterations to record. Generally, a quiet state of business is reported from the manufacturing districts.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue dull, with the exception of sulphur, which is scarce and in demand, and sales are reported £4. 5s. per ton. South Durham salt is steady, at 9s. 6d. per ton, f.o.b., for common salt.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s. per ton nett; caustic soda, 77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 5s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s. per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, £6. 15s.; sulphide of barium crystals, £5. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

Coal continues in good demand. Best Northumbrian steam are 8s. 6d. per ton, f.o.b. Tyne; steam smalls about 3s. 6d. Bunker coals are in good demand, and the price is steadier. The consumption of gas coals is increasing, and though there is no alteration in prices yet, the market is steadier. Coke continues steady on the whole, the local consumption being very heavy. For export, 14s. 6d. per ton, f.o.b. is quoted for best Durham qualities.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The market remains quiet, with but little alteration in prices; still that little alteration shows some improvement upon previous rates. The importation during the week has been:—Linseed, 4,737 quarters, viz., from Bombay 2,167 quarters, and St. Petersburg 2,570 quarters, making a total for the year to date of 401,276 quarters, against 307,021 quarters a year ago; cottonseed, 360 tons from Alexandria, making a total for the year of 98,940 tons, against 106 750 tons a year ago. Linseed oil 15s. 3d., spot, naked, sellers; July-August, 15s. 4½d, and September-December 15s 10½d.; January-April 16s. 3d., sellers, and May-August quoted 16s. 6d. Boiled and refined from £1. to £2. per ton extra. Export for the week, 1,280 cwts. Refined cotton oil quiet, 14s. 1½d., naked, spot. August-October 14s. 3d., November-April 14s. 4½d., sellers—casks £1. and ordinary barrels 30s. per ton extra. Export of refined oil 3,420 cwts. The importation of butter into Grimsby has been well maintained, as also the prices for same. Turpentine and olive oils unchanged. Castor oil 2½d. per lb., and firm thereat. Cod oils £17. to £20 per ton. Sperm oil from £21. per ton. Wool or Yorkshire grease £8. per ton, f.o.b. Locomotive grease £10. per ton.

CAKES.—The demand is very quiet, many of the mills being either closed or running short time. Linseed cakes, £4. 7s. 6d. to £5. 7s. 6d. per ton; cottonseed, £3. 10s. to £3. 15s.; Black Sea rape, £2. 2s. 6d, principally used for manure purposes.

PAINTS.—Manufacturers are not quite so busy, still business is good for painters' materials. White and red leads unchanged: dry venetian red from £4.; dry ochres from £2. 15s; oxide of iron from £6. Black, blue, green and red colours, in oil, from £11. per ton. Ready-mixed paints from £24. per ton. Paint, £1. 5s. to £1. 10s. per cwt. Imperial black varnish, £5. 15s.; oak varnish from 5s. 6d. per gallon.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—There is very little doing in palm oil: Lagos is neglected, and such sales as have been made were in Benin and soft oils. The demand for olive has picked up, and Seville has been moving pretty well at £28. 10s. per tun. Linseed is practically unaltered, Liverpool makes in export casks standing at 17s. 6d to 19s. per cwt., according to quality. The quietude that has characterised cottonseed continues, but holders still quote Liverpool refined 15s. 9d. to 16s. 3d., and American 16s. 6d. per cwt. Castor oil is very firm on spot, while the forward market is hardening. Good seconds Calcutta figure at 3¼d. to 3¼d. for spot; first pressure French 2¾d. to 2¾d. per lb. Tallow quiet, the tone being dull. Resin is steady. Lower grades show a slight weakening, but prices are well maintained, especially for the higher grades. The general indications are against anything like a fall in any section. Spirits of turpentine are weak, with only a moderate demand at 19s. 6d per cwt., on spot. Petroleum steady, and inclined to rise: American, 6¼d. to 7½d., and Russian refined 5½d. per gallon.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Business has by no means fully recovered its normal swing as yet, after the holidays, and a few of the works are still to re-open, the excuse for closing being welcome and made the most of. Indeed the tone of the market is the reverse of inducive towards a vigorous production. Prices are for the most part edging downwards, and some which seem stationary are only nominally so. Sulphate of copper is quoted lower, and the heavier packing of bicarbonate of soda is also quoted a fraction down. Sulphate of ammonia may be stated at £7. 17s. 6d., prompt, Leith, but buyers are not plentiful, and some sellers may be parting at a shade lower. Nothing at all moving for forward, there being no money offering as yet which sellers can look at. Mineral oils in the lubricating section are strong, and prices are well maintained as regards the high grades, but 865° gravity is slightly cheaper, being rather overstocked.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. 10s. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliver export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. Scotch and English deliveries (for export, 3½d. nett, f.o.b. Gla chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s to 8s. 1¼d.; sulphate of ammonia, £7. 17s. 6d. f.o.b., Leith; salammoniac, first and second white, £37. an nett, any port; sulphate of copper, £16. 10s. less 5%, Liverpool; scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraf 120° semi-refined, 2 1/16d. to 2¼d. per lb.; paraffin spirit (naphtha) gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6 Glasgow and other big centres, for Scotch buyers (English sales ¼d. lower); ditto (lubricating) 865° £4. 8s. 9d. to £5., 885° £ to £6., and 890/895° £6. to £6. 10s. Week's imports of Greenock were 32,866 bags and 11,800 baskets cane unrefined bags beet unrefined, and 750 bags grape.

New Companies.

Brazilian Chemical Company, Limited.—CAPITAL £ in £1. shares. This company has been formed to acquire a over the rights, etc., of J. Peake, of Stoke-on-Trent, which ha granted by the Government of Brazil, and to trade as metal manufacturing chemists, drysalters, oil and colourmen, etc. T scribers to the memorandum of association are:—J. Peake, upon-Trent, merchant; J. Knight, Newcastle, Staffordshire, H. I. Williams, Kidsgrove, Staffordshire, merchant; E. Burslem, Staffordshire, solicitor; I. H. Bulleid, Ne Staffordshire, solicitor; C. F. Crow, Woodstock-road, merchant; J. Heath, M.P., 54, Cadogan-square, S.W.

Derby Syndicate, Limited.—CAPITAL £7,000, in £1. This company has been formed to prospect and work certai and to chemically or otherwise render marketable all kinds of from lands, mines, etc. The subscribers to the memoran association are:—J. Nelson, Armfield's Hotel, South-place, gentleman; J. A. W. Howmann, 24, Ashbourne-road, Derb tiller; E. J. King, Park-mount, Edgbaston, Birmingham, distil Barry, Hawick, N.B., solicitor; A. Laing, Hawick, N.B., so J. S. Turner, Hawick, N.B., merchant; F. A. Surle, 11, Ange E.C., broker.

Gazette Notices.

PARTNERSHIP DISSOLVED.

W. WRIGHT and M. OLIVE, chemical manufacturers, Otley, under the William Wright and Co.

BANKRUPTCY ACTS, 1883 and 1890.

Receiving Order.

JOHN, WILLIAM SWAIN AND CO., oil brokers, Cardiff.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 18th.

Acetic Acid—

Holland,	120 pks.	Little & Johnston
Germany,	7	H. Lotenz
Sweden,	31	R. G. Hall & Co.

Acetone—

Holland,	20 drs.	T. H. Lee

Alkali—

Germany,	13 c.	W. J. Murray
France,	40	J. Barber & Co.
,,	40	Spies Brs. & Co.

Alum Stone—

Sydney,	4,080 c.	Fisher, Renwick & Co.

Ammonium Chloride—

Germany,	2 cks.	Elkan & Co.

Antimony Ore—

France,	2 l.	H. Johnson & Sons
Turkey,	100	J. Bamber
Spain,	10	H. Grey, jun.
E. Indies,	25	R. & J. Henderson

Asbestos—

Germany,	£30	T H Lee
Holland,	24	Phillipps & Graves
,,	7	T. H. Lee
W. Indies,	12	S. Taylor

Barytes—

Belgium,	76 cks.	W. Harrison & Co.
Holland,	123	,,
,,	47	E. J. Diggins
,,	22	O'Hara & Hoar
Belgium,	46	Perkins & Homer
Germany,	19	Randall Brs.
,,	44	W. Harrison & Co.
Holland,	88	Taylor Brs & Co.
Belgium,	36	J. L. Lyon & Co.

Boracic Acid—

Germany,	4 pks.	F. Boehm

Camphor—

Germany,	1 ck.	Elkan & Co

Caoutchouc—

Melbourne,	68 c.	D. Baird & Co.
Zanzibar,	40	Prop. Bull Wf.
,,	16	Blyth, Greene & Co.
,,	25	L. & I. D. Jt. Co.
Singapore,	74	,,
U. States,	13	,,
Singapore,	400	Vokins & Co.
Ceylon,	30	L. & I. D. Jt. Co.
Germany,	47	,,
,,	25	S. Figgis & Co.
,,	102	Anderson, Weber & Co.
,,	40	Wallace Brs.
,,	108	Forbes, Forbes & Co.
Madagascar,	39	Procter Brs.
,,	1,091	Hammond & Co.
Germany,	21	F. Huth & Co.
Zanzibar,	14	Clarke & Smith
,,	8	S. Figgis & Co.
Madagascar,	23	,,
,,	53	Kleinwort Sons & Co.

Carbolic Acid—

Holland,	2 cks.	J. Owen

Castor Oil—

France,	30 cs.	C. Windschnegl & Co.

Caustic Potash—

France,	20 drs.	Petri Brs.

Chemicals (*otherwise unde*

E. Indies,	£6	Brown &
Germany,	30	R. W
Italy,	7	Fellows, Morto
Germany,	20	H.
,,	35	L. & I. D.
,,	6	T.
,,	850	,,
,,	99	Zanz
Holland,	4	Phill pps & F.
Germany,	940	T.
,,	7	Pickfor
,,	25	R. W.
Holland,	20	J. Barke
,,	6	T.

Cream of Tartar—

France,	10 cks. 26 kgs.	B. W
Holland,	14	G. Rahr
France,	3	Vokins
Spain,	13	B. & F. W
Holland,	20	Kirkpatrick
Spain,	5	W. C. Bunn
France,	24	,,
Portugal,	5	B. & F. W

Cresylic Acid—
Germany, 66 pks. J. G. Back

Cryolite—
Denmark, £37 H. Johnson & Sons

Dextrine—
Germany, 100 bgs. Vokins & Co.

Dyestuffs—
Argols
Italy, 212 cks. Thames S. T. & L. Co.
" 1 L. & N. W. Rly.
" 2,595 B. Jacob & Sons
Cochineal
Canaries, 5 bgs. W. M. Smith & Sons
Cutch
Germany, 195 cs. Wallace Brs.
Ceylon, 60 Cayzer, Irvine & Co.
Singapore, 450 bxs. Williams, Torrey & Co.
Rangoon, 600 T. Palmer, jun.
Extracts
France, 3 cks. J. Burnett
Denmark, 1 Sorensen & Co.
B. Ayres, 200 bgs. Beresford & Co.
Canada, 400 A. J. Humphery
Fustic
B. W. I., 3 t. Park Macfadyen & Co.
Gambier
Singapore, 1,373 bls. Nat. S. S. Co.
" 507 bgs. S. Barrow & Bro.
Indigo
E. Indies, 77 cbts. Wallace Brs.
" 5 J. Owen
" 30 P. Macfadyen & Co.
" 1 Walker, Munsie & Co.
" 63 L. & I. D. Jt. Co
" 12 Croysdale & Co.
Ceylon, 11 Taylor Brs. & Co.
E. Indies, 2 Arbuthnot, Latham & Co.
" 39 F. W. Heilgers & Co.
Logwood
B.W.I., 53 t. Anderson, Anderson & Co.
Myrabolams
E. Indies, 200 bgs. Baxter & Hoare
" 1,366 G. Suter
Orchella
E. Indies, 31 bls. Hoare, Wilson & Co.
Saffron
E. Indies, 11 bls. Lewis & Peat
Shumac
Italy, 100 bgs. E. A. Cummins
" 1,750 Bevington & Sons
Tanners' Bark
Natal, 30 t. A. & W. Nesbitt
Adelaide, 100 J. Greig
" 100 Baxter & Hoare
Natal, 30 Brown & Elmslie
Adelaide, 170 Dyster, Nalder & Co.
Portland, 49 Brown & Elmslie

Farina—
Holland, 100 bgs. J. Barber & Co
" 150 Seaward Brs.
" 50 J. Knill & Co

Gamboge—
Singapore, 10 cs. R. & J. Henderson

Glucose—
U. States, 4 pks. 20 c. H. W. Peabody & Co.
" 499 499 Humphery & Co.
" 250 250 Soundy & Sons
" 250 250 Bellamy & Co.
" 250 250 W. Pells & Son
Germany, 18 150 J. Knill & Co.
" 400 400 L. Norman & Co.
U. States, 50 410 "
" 300 550 R. G. Hall & Co.
" 550 3,145 E. & T. Pink
" 50 291 J. Keiller & Son
" 100 382 Deering & Robottom
" 5,000 5,000 Pearce, Pelly & Co.
Germany, 40 393 Bennett S. S. Co.
U States, 250 250 "
" 499 499 W. Balchin

Glue—
——, £797 ——

Manganese Ore—
E. Indies, 70 t. Cayzer, Irvine, & Co.

Manure—
Germany, 50 t. F. W. Berk & Co., Ltd.
Sydney, 1 Brown & Elmslie
Germany, 60 D. de Pass & Co.

Methyl Alcohol—
Germany, 11 dms. Stein Brs

Mica—
E. Indies, £226 5 W. M Smith & Sons
" 78 E. Davis & Co.
Madras, 530 W. M. Smith & Sons
" 40 W. Brandts, Sons, & Co.
" 15 Arbuthnot, Latham, & Co.
E. Indies, 1,478 J. Mitchell

Molasses—
B. Guiana, 88 cks. W. Balchin

Nickel Sulphate—
Belgium, 12 pks. D. C. Thomas & Sons

Nitre—
Holland, 7 cks. Phillipps & Graves

Ochre—
France, 103 cks. W. E. Cole
" 108 T. Cartwright
" 34 129 brls W. Harrison & Co.
Holland, 32 pks. Phillipps & Graves

Phosphate Rock—
Belgium, 50 t. Chemical Works
France, 250 Lawes Chemical Manure Co.

Pitch—
Sweden 10 brls. Atlantic Wf. Co.
Germany, 58 C. B. Leighton

Plumbago—
Germany, 5 cks. T. H. Lee
Ceylon, 64 J. Threlfall, Son, & Co
" 145 Vokins & Co.

Potassium Carbonate—
Germany, 640 c. W. G Blazden
France, 32 J. A. Reid
Germany, 40 R. W. Greeff & Co.
" 100 Petri Brs.
" 200 J. M Steel & Co.

Potassium Chloride—
Holland, 14 cks. H Johnson & Sons
Germany, 203 bgs. Davies, Turner, & Co.

Potassium Oxymuriate—
Sweden, 8 kgs. G. Boor & Co.

Potassium Permanganate—
Holland, 20 cks. T. H. Lee

Rosin—
U. States, 250 brls. G. Nutter
France, 13 B. & F. Wf. Co.

Saltpetre—
Germany, 40 cks L. & I. D. Jt. Co,
Holland, 8 Deering & Robottom
E. Indies, 1,403 bgs. Lucas & Spencer's Wf.
" 1,223 C. Wimble & Co.

Silica—
Germany, £370 A. Haacke & Co.

Soda—
Rio de Janeiro, 31 c. Union L. Co.

Sodium—
Belgium, 14 cs. T. G. Back

Sodium Acetate—
France, 30 cks H. Lorenz

Sodium Hyposulphite—
Holland, 100 kgs. F. C. Devon & Co.
" 29 cks. J. Owen

Starch—
Holland, 144 cs. G. Rahn & Co.
" 145 T. H. Lee
U. States, 40 bgs. Deering & Robottom
Belgium, 640 F. Claydon & Co.
Holland, 274 Phillipps & Graves
" 1,200 Vokins & Co.
Belgium, 560 Langstaff & Co.
" 80 Sawer, Sons, & Co.
" 80 Taylor Brs.
" 400 E. & T. Pink
" 240 T. H. Lee
Germany, 1,200 Horne & Co.
" 320 Seaward Brs.
France, 8 pks. B. & F. Wf Co

Stearine—
Canada, 50 cks. S. J. Clark
Holland, 62 bgs. H. Hill & Sons
France, 100 Bennett S. S. Co.
Belgium, 127 6 H. Hill & Sons

Sulphur—
Italy, 2,015 t. W. C. Bacon & Co.
Belgium, 53 Sawer, Sons, & Co.
Italy, 14 E. & T. Pink

Tartaric Acid—
Holland, 11 pks. B. & F. Wf. Co.
" 13 Kirkpatrick & Co.

Ultramarine—
Holland, 1 cs. Phillipps & Graves
" 5 G. Rahn & Co.
" 10 7 pks. Hernu, Peron, & Co.
" 6 Haeffner, Hilpert, & Co.

Varnish—
U. States, 4 pks. L. & I. D. Jt. Co.
Germany, 15 Schenker & Co.
U. States, 86 Pinchin & Johnsen
" 15 Lunham & Moore
" 6 Dawson Brs.

Verdigris—
France, 3 cks B. & F. Wf. Co

White Lead—
Holland, 50 cks. T. & W. Farmiloe
Austria, 20 cs. W. Adolph & Co
Belgium, 20 brls. Perkins & Homer
" 20 J. L. Lyon & Co.
" 40 cks. W. & A. Hampton
Germany, 13 W. A. Rose & Co.

Wood Pulp—
Sweden, 320 pks. Henderson, Craig, & Co.
" 340 W G Taylor & Co
Norway, 3,235 Moreton Cox Brs.
U. States, 480 L. & I. D. Jt. Co.
Holland, 361 E. J. & W Goldsmith
" 14 Henderson, Craig, & Co.
Norway, 660 E. J. & W. Goldsmith
Germany, 125 H. C. Everett
Holland, 270 Phillipps & Graves
" 52 W. G. Taylor & Co.
Norway, 1,760 G. Sharp
" 402 Tough & Henderson
Germany, 108 "
Belgium, 1,374 E. J. & W Goldsmith

Zinc Oxide—
Holland, 100 brls. M. Ashby, Ltd.
Belgium, 5 O'Hara & Hoar
Germany, 50 M Ashby, Ltd.
U. States, 100 "
Germany, 500 cks. Soundy & Sons
Holland, 4 J. Barber & Co

Zinc White—
Belgium, 16 brls. Perkins & Homer

LIVERPOOL.

Week ending July 16th.

Acetic Acid—
Rotterdam, 11 balloons 17 carboys

Alum Cake—
Rotterdam, 66 cks

Ammonium Chloride—
Montreal, 14 brls.

Asbestos—
Rotterdam, 12 bls. 11 pks.

Barytes—
Antwerp, 84 cks. 50 bgs.

Bone Ash—
River Plate, 48 bgs. Williamson Milligan

Bone Meal—
Bombay, 1,680 bgs.

Boracic Acid—
Genoa, 4 brls
Leghorn, 61 cks.

Boracite—
Panderma, 6,699 bgs.

Borax—
Valparaiso, 2,446 sks
Mollendo, 210 A. & S. Henry
" 200

Caoutchouc—
Havre, 14 cks. Stott, Coker & Co
" 450 sks. 65 cs.

Castor Oil—
Leghorn, 30 cs.

Colours—
Hamburg, 2 brls.
Antwerp, 2
Rotterdam, 32 cks.

Copper Sulphate—
Bordeaux, 1 pcl.

Cottonseed Oil—
New York, 25 brls.

Cream of Tartar—
Tarragona, 5 butts Sachse & Klemm
" 5 pps.

Dyestuffs—
Algarrobilla
Totoralillo, 158 sks. Schnitz & Co.
Argols
Bordeaux, 4 cks.
Extracts
Hamburg, 40 bgs. 1 cs. 20 l cs.
Fustic
Vera Cruz, 371 ps.
" 712 B. B. Watson & Co.
Myrabolams
Bombay, 2,360 bgs.
Saffron
Valencia, 2 cs.
Shumac
Palermo, 1,000 bgs.
Turmeric
Bombay, 69 bgs.
Valonia
Aliki, 500 bgs. Papayanni & Jeremias

Farina—
Harlingen, 50 bgs.
Havre, 610 sks.
Hamburg, 1,030 bgs. H. Tyrer & Co.
Fiume, 20
" 200 F. T. Vander Veen & Brs.

Glucose—
New York, 298 brls.
Boston, 200
Philadelphia, 50
Baltimore, 47

Glue—
Genoa, 6 cks.
Hamburg, 200 bgs
Antwerp, 2

Guano—
River Plate, 1,226 bgs. Williamson Milligan

Gypsum—
Bremen, 50 bgs.

Infusorial Earth—
Hamburg, 2 bgs.

Limestone—
Antwerp, 1 cs. 2 crts. J. T. Fletcher & Co.

Litharge—
Rotterdam, 8 cks.

Magnesium Borate—
Bremen, 4 cks.

Manganese—
Bremen, 1 ck.

Manganese Ore—
Poti, 2,350 t.
Visagapatam, 1,002 Darwen & Mostyn Iron Co.

Manure—
Philadelphia, 177 bgs.

Molasses—
Hamburg, 500 cks.

Ochre—
Leghorn, 10 cks.
Rouen, 1 R. J. Francis & Co.
Marseilles, 86 brls.

Phosphate Rock—
Port Royal, 1,100 t. J. Adger & Co.

Potassium Nitrate—
Valparaiso, 8 bgs. J. M. Gildemeister

Pumice Stone—
Messina, 20 cs.

Pyrites—
Huelva, 1,322 t. Matheson & Co.

Rosin—
New York, 10 brls.
Boston, 400

Soap—
Leghorn, 750 bxs. Weaver & Sterry
" 110 cs.
Philadelphia, 25
Bari, 81
Naples, 277

Soapstone—
Bordeaux, 100 bgs. G. G. Blackwell, Sons & Co.

Starch—
Antwerp, 235 cs. J. T. Fletcher & Co.
" 190
Ghent, 8
Rotterdam, 40 166 bxs. "

Stearine—
Antwerp, 26 bgs.

Sulphur—
Catania, 25 t. 1,400 bgs

Tallow—
New York, 56 bgs. Evans & Co
Boston, 63 brls. 655 tcs.
Philadelphia, 207
Tar—
Genoa, 2 cks.
Tartar—
Naples, 2 cks.
Hamburg, 7
Bordeaux, 23
Tartaric Ac'd—
Marseilles, 10 cks.
Treacle—
New York, 500 brls.
Philadelphia, 1,500
Varnish—
Hamburg, 9 hubbocks
Waste Salt—
Hamburg, 240 cks. H. Tyrer & Co.
" 2,007 bgs.
Wood Pulp—
Montreal, qty. & 1,930 bdls.
Boston, 75 bls.
Rotterdam, 232
Zinc Ashes—
Genoa, 3 cks.
Zinc Oxide—
Antwerp, 65 brls.
Zinc White—
Rotterdam, 8 cks. J. Mathews & Co.
" 10

MANCHESTER.

Week ending July 18th.

Acetate of Lime—
New York, 1,489 bgs.
Acetic Acid—
Antwerp, 40 blns.
Albumen—
Paris, 1 ck. 7 cs.
Alumina Sulphate—
Rotterdam, 32 cks.
Anthracene—
Boulogne, 14 cks.
Antimony Oxalate—
Rotterdam, 4 cks.
Chemicals *(otherwise undescribed)*
Rouen, 30 cks.
Colours—
Boulogne, 2 cks. 5 cs.
Hamburg, 5 3
Ghent, 2 brls.
Antwerp, 26 22
Rotterdam, 27 27 80
21 bxs.
Dyestuffs—
Alizarine
Rotterdam, 73 cks. 3 cs.
Indigo
Rotterdam, 3 chts.
Shumac
Palermo, 450 bls.
Farina—
Hamburg, 70 bgs.
New York, 506 sks.
Gelatine—
Rouen, 10 cs
Glucose—
New York, 130 brls.
Glue—
Rotterdam, 8 cks. 80 bgs.
Rouen, 20 20
Fiume, 44
Antwerp, 2 22 bls.
Treport, 10 5 cs.
Limestone—
Antwerp 2 cs. J. T. Fletcher & Co.
Mineral White—
Fiume, 800 bgs.
Naphthol—
Rotterdam, 4 cs.
Nickel Sulphate—
Hamburg, 1 ck.
Ochre—
Treport, 5 cks.
Paraffin Scale—
New York, 500 brls. Anglo-American Oil Co., Ld.
Potash—
Rotterdam, 30 cks.
Treport, 57 60 dms.
Potassium Oxide—
Hamburg, 2 cs.
Potassium Prussiate—
Antwerp, 9 cks.
Potassium Sulphate—
Rotterdam, 100 cks.
Soap—
Rotterdam, 1 cs.
New York, 40 brls.
Sodium Silicate—
Antwerp, 5 cks.
Starch—
Fiume, 100 bgs.
Ghent, 16 cs.
Stearine—
Antwerp, 13 bgs.
Sulphuric Acid—
Rotterdam, 10 dms.
Tallow—
New York, 250 tcs Co-op. W'sale Society, Ld.
Tartaric Acid—
Rotterdam, 17 cks.
Ultramarine—
Hamburg, 16 cks.
Wood Pulp—
Helsingfors, 100 pcls. Felber, Jucker, & Co.
566 bls.
Christiania, 1,180 W. H. Ingram
" 400
Holmestrand, 3,000 "
Skien, 1,700 "
Fiume, 102 pks.
Rotterdam, 76
Zinc Oxide—
Rotterdam, 25 brls.

HULL.

Week ending July 18th.

Acetic Acid—
Rotterdam, 34 blns. Hutchinson & Son
Albumen—
Riga, 10 cs. Helmsing & Son
Alizarine—
Rotterdam, 5 cks.
" 11 W. & C. L. Ringrose
Aniline Colours—
Rotterdam, 1 kg. Hutchinson & Son
Asbestos—
New York, 2 pks. Wilson, Sons, & Co., Ld
Barytes—
Riga, 25 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 42 W. & C. L. Ringrose
Bremen, 21
Antwerp, 18 Bailey & Leetham
Castor Oil—
Antwerp, 3 brls. Wilson Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Antwerp, 2 cks. Wilson, Sons, & Co., Ld.
Danzig, 16
Dunkirk, 130 "
Hamburg, 3 cs. "
Bremen, 2 Veltmann & Co.
" 4 cks. Todd & Son
Cod Oil—
Christiania, 5 brls. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 23 cks. Wilson,
25 pks. Sons, & Co., Ld.
Hamburg, 6 cs.
Stettin, 9 "
" 4
Ghent, 15 "
Rotterdam, 36 17 W. & C. L
34 brls. 6 bxs. Ringrose
Cryolite—
Copenhagen, 3 cks. Wilson, Sons, & Co., Ld.
Dextrine—
Stettin, 50 bgs.
Dyestuffs *(otherwise undescribed)*
New York, 200 brls. Wilson, Sons, & Co., Ld.
Farina—
Stettin, 150 bgs.
Harlingen, 250 W. & C. L. Ringrose
Hamburg, 100 Bailey & Leetham
Rotterdam, 500 Wilson, Sons, & Co., Ld.
Stettin, 120 "
Glucose—
New York, 100 brls. Wilson, Sons, & Co., Ld.
" 954
Glue—
Dunkirk, 10 cks. Wilson, Sons, & Co., Ld
Christiansund, 2 brls "
Rouen, 10 bls. 27 cks. Rawson & Robinson
Antwerp, 3 Bailey & Leetham
Kaolin—
Amsterdam, 20 cks. Hutchinson & Son
Ochre—
Rouen, 18 cks. Rawson & Robinson
Phosphate—
Ghent, 816 bgs.
Pitch—
Rotterdam, 7 cks Hutchinson & Son
Antwerp, 18
Hamburg, 77 brls. Wilson, Sons, & Co., Ld.
Potash—
Rotterdam, 2 cks. Hutchinson & Son
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
New York, 80 brls.
Starch—
Amsterdam, 5 cs. W. & C. L. Ringrose
Odessa, 400 bgs. Wilson, Sons, & Co., Ld.
Rotterdam, 40 cs. Hutchinson & Son
Bremen, 2,558 Veltmann & Co.
Tallow—
New York, 225 tcs. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 7 cks. Hutchinson & Son
Treacle—
New York, 775 brls. Wilson, Sons, & Co., Ld.
Varnish—
New York, 57 pks Wilson, Sons, & Co., Ld.
" 2 brls.
White Lead—
Rotterdam, 94 cks. Hutchinson & Son
Amsterdam, 42 "
Wood Pulp—
Abo, 130 bls. J. Good & Sons

GLASGOW.

Week ending July 23rd.

Acetate of Lime—
Philadelphia, 203 bgs.
Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son
Hamburg, 3 cs.
Aniline—
Rotterdam, 4 cks. J. Rankine & Son
10 cs.
Asbestos—
Rotterdam, 4 bls. J. Rankine & Son
Barium Chlorate—
Rotterdam, 5 cks.
Barium Sulphate—
Antwerp, 5 bgs.
Barytes—
Rotterdam, 65 pks.
Chrome Ore—
Noumea, 300 t. Stevenson & Carlisle, Ld.
Chromium Fluoride—
Rotterdam, 10 cs. J. Rankine & Son
Citric Acid—
Messina, 12 cks.
Palermo, 4
Colours—
Hamburg, 8 cks. 9 cs.
Rotterdam, 4 J. Rankine & Son
Antwerp, 3 3 cs.
Rotterdam, 21 pks.
Cream of Tartar—
Bordeaux, 5 cks.
Dyestuffs—
Alizarine
Rotterdam, 3 brls. J. Rank
" 60 pks.
Extracts
New York, 75 bxs.
Logwood
Bouling, 470 t.
Madder
Rotterdam, 5 cks. J. Rank
Shumac
Palermo, 25 bgs.
Glucose—
Philadelphia, 150 brls.
New York, 946
Glue—
Rotterdam, 10 bkts. J. Rank
New York, 97 brls.
Hamburg, 60 bgs.
Guano—
Iceland, 1,052 bgs.
Molasses—
Montreal, 1 brl.
Potash—
Rotterdam, 82 cks. J. Rank
Potassium Sulphate—
Rotterdam, 6 cks J. Ran
Pyrites—
Huelva, 1,994 t. Tharsis
Rosin—
Brunswick, Ga., 738 brls.
New York, 1,321
Sheep Dip—
Hamburg, 1 cs.
Soap—
Philadelphia, 600 bxs. 30 crts
Starch—
Philadelphia, 190 sks. Jas. Ogle &
New York, 350 bgs.
Antwerp, 23
Stearine—
Rotterdam, 13 cks. J. Ran
Sulphur Ore—
Huelva, 1,420 t. Rio Tinto
Talc—
New York, 30 cs.
Tallow—
Boston, 25 tcs.
New York, 20
Treacle—
New York, 749 brls.
Turpentine—
Brunswick, 2,000 cks.
Varnish—
New York, 102 brls. 30 cs.
Waste Salt—
Hamburg, 173 t.
White Lead—
Rotterdam, 87 cks. J. Ran
Wood Pulp—
Christiania, 1,510 bls.
Hamburg, 244
Zinc Sulphate—
Rotterdam, 5 brls. J. Ran
Zinc White—
Rotterdam, 35 cks. J. Ran

TYNE.

Week ending July 18th.

Alum Earth—
Hamburg, 131 cks. Tyne S. S.
Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S.
Barytes—
Antwerp, 100 bgs. Tyne S. S.
Rotterdam, 14 cks. "
Castor Oil—
Antwerp, 29 brls. Tyne S. S.
Cod Oil—
Bergen, 5 brls.
Limestone—
Antwerp, 7 cs. Tyne S. S.
Phosphate—
Antwerp, 280 t.

Saltpetre—
Hamburg, 2 cks. Tyne S. S. Co.
Soap—
Hamburg, 1 cs. Tyne S. S. Co.
Rotterdam, 3 ,,
Starch—
Antwerp, 12 bxs. Tyne S. S. Co
Rotterdam, 144 cs. ,,
Waste Salt—
Harburg, 430 t.
Wood Pulp—
Christiania, 1,200 bls.
Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

GOOLE.

Week ending July 15th.

Acetic Acid—
Rotterdam, 2 cs.
Alizarine—
Rotterdam, 22 cks.
Alkali—
Calais, 20 cks.
Aniline—
Amsterdam, 4 cks.
Rotterdam, 261 37 cs.
Hamburg, 17
Barytes—
Antwerp, 20 bgs.
Caoutchouc—
Boulogne, 7 bxs.
Dyestuffs *(otherwise undescribed)*
Boulogne, 17 cks. 18 cs. 48 pks.
Farina—
Hamburg, 195 bgs.
Delfszyhl, 905
Fustic—
Jamaica, 405 t.
Glucose—
Hamburg, 12 cks.
Calais, 100 bgs.
Logwood—
Hayti, 450 t.
Progresso, 520
Madder—
Rotterdam, 1 ck.
Amsterdam, 9
Potash—
Dunkirk, 26 dms.
Calais, 6
Pyrites—
Huelva, 980 t.
Saltpetre—
Hamburg, 40 cks.
Rotterdam, 100 bgs.
Sodium Silicate—
Rotterdam, 2 cks.
Starch—
Ghent, 108 bxs.
Waste Salt—
Hamburg, 478 cks. 373 t.

GRIMSBY.

Week ending July 18th.

Albumen—
Hamburg, 4 cs.
Caoutchouc—
Hamburg, 12 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 17 cs.
Rotterdam, 20 pks.
Colours—
Antwerp, 4 cks. 17 cs. 8 pks.
Hamburg, 19 2
Dyestuffs *(otherwise unaescribed)*
Dieppe, 25 cks.
Antwerp, 10 49 cs.
Starch—
Antwerp, 20 cs.
Wood Pulp—
Rotterdam, 68 pks.
Malmo, 82 bls.
Gothenburg, 200

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 22nd.

Acids—
Colombo, 6 cs. £24
Natal, 5 drs. 12
E. London, 7 t. 18 c. 100
New York, 1 17
Alkali—
Lyttelton, 1 t. 3 c. £19
Napier, 10 10 71
Alum—
Calcutta, 30 t. 2 c. £74
Ammonia—
Cape Town, 1 cs. £16
Malaga, 4 c. 15
Ammonia (Liquid)—
Bombay, 15 pks. £31
Brussels, 20 drs. 35
Natal, 16 c. 23
Rotterdam, 50 75
Ammonium Carbonate—
Pari-, 13 pks. £59
Ammonium Chloride—
Libau, 1 t. £23
Ammonium Sulphate—
Mauritius, 100 t. 4 c. £814
Hamburg, 100 850
Borax—
Brisbane, 10 kgs. £10
Calcium Chlorate—
Gladstone, 14 drs. £13
Wanganui, 4 t. 1 c. 12
Calcium Chloride—
Sydney, 1,048 drs. £580
Natal, 10 11
Carbolic Acid—
Rotterdam, 80 cks. £669
Antwerp, 3 7
Caustic Potash—
Cape Town, 1 ck. £10
Caustic Soda—
Melbourne, 9 c. £10
Newcastle, 20 t. 180
Launceston, 2 6
Philadelphia, 33 10 242
Chemicals *(otherwise undescribed)*
Gibraltar, 12 pks. £25
Melbourne, 20 cks. 20 cs. 400
Lyttelton, 1 t. 18 c. 47
Natal, 5 10
Malaga, 6 18
Kingston (Ont.), 1 bx. 20
Madras, 4 16
Calcutta, 13 76
Sydney, 1 10
Citric Acid—
St. Petersburg, 10 c. £62
Melbourne, 10 kgs. 62
Antwerp, 1 t. 126
Valparaiso, 3 19
Rotterdam, 1 125
Stettin, 4 26
Riga, 5 37
Perth 2 16
Karachi 1 cs. 12
Coal Products—
Alizarine
New York, 25 cks. £306
Montreal, 15 194
Aniline Oil
Rotterdam, 10 drs. £410
Anthracene
Dusseldorf, 120 cks. £600
Benzol
Rotterdam, 13 cks. £159
Amsterdam, 24 drs. 240
Creosote
Lisbon, 81,515 gallons £914
Creosote Salts
Philadelphia, 682 bgs. £90
Naphtha
Le Treport, 25 cks. £80
Naphthaline
Marseilles, 20 cks. 37 bgs. £53
New York, 30 cs. 82
Le Treport, 10 145 88
Pitch
Salonica, 100 brls. £37
Philadelphia, 247 cks. 140
Alexandria, 100 24
Bilbao, 8 10
Port Said, 40 147
Auckland 4 cs. 20 drs. 8
Boston, 500 289
S. Nazaire, 750 t. 1,378
New York, 1,100 cks. 4,293 bgs. 1,392
Tar
Melbourne, 100 drs. £18
Tar Oil
Colombo, 40 dms. £15
Boston, 240 brls. 84
Copper Sulphate—
Brussels, 5 t. £92
Marseilles, 20 363
Odessa, 5 18 c. 110
Cream of Tartar—
Algoa Bay, 5 kgs. £38
Cossack, 1 t. 54
Hiogo, 1 10 c. 153
Otago, 10 54
Fremantle, 5 25
Sydney, 1 102
Christchurch, 10 cs. 83
Lyttelton, 5 25
Disinfectants—
Hamburg, 75 cks. £375
Brisbane, 13 pks. 26
Bombay, 10 41
Bordeaux, 4 21
Natal, 2 cs. 20 dms. 8 13 c. 87
Fremantle, 8 20
Madras, 100 cks. 25 drs. 70
Calcutta, 62 14
Manure—
Libau, 1,200 t. £3,580
Gothenburg, 49 5 c. 115
Bundaberg, 12 18 400
Mauritius, 20 4 360
Memel, 750 1,780
Demerara, 25 250
Nitric Acid—
Jersey, 24 carboys £42
Phosphorus—
Dunedin, 10 cs. £102
Potash Crystals—
Christchurch. 5 cks. £28
Potassium Bichromate—
Sourabaya, 8 c £20
Potassium Chlorate—
Sourabaya, 1 t. £40
Potassium Cyanide—
Adelaide, 2 t. 14 c. £350
Madras, 5 4 402
Potassium Prussiate—
New York. 10 cks. £169
Philadelphia, 25 415
Genoa, 2 36
Rotterdam, 1 23
Salt Cake—
Antwerp, 125 t. £219
Saltpetre—
Vigo, 3 t. 6 c. £68
Santos, 2 4 53
Newcastle, 10 11
Amsterdam, 1 11 37
Bahia, 18 5 398
Rio de Janeiro, 14 14 331
Sydney, 5 112
Salts of Soda and Lime—
Brussels, £29
Sheep Dip—
Cape Town, 5 t. £60
Jamaica, 34 drs. 1 cs. 16
Hobart, 5 7 c. 175
Geelong, 2 14 88
E. London, 4 9 175
Falkland Is., 100 cks 449 drs. 1,028
Pt. Elizabeth, 3 t. 1 65
Beira, 10 cs. 26
Bombay, 207 pks. 55
Algoa Bay, 6 3,500 dms 572
Natal, 6 6 218
Launceston, 60 cs. 150
Soda Crystals—
Melbourne 15 c. £30
Pt. Elizabeth, 1 t. 13 5
Newcastle, 16 5 36
Sodium Bicarbonate—
Hobart, 9 c. £5
Maryboro', 12 6
Pt. Elizabeth, 18 7
Sodium Carbonate—
Natal, 12 c. £5
Sulphur—
Cape Town, 25 cks. 30 kgs. £45
Melbourne, 30 brls. 21
Sulphuric Acid—
Cape Town, 1 cs. £14
Natal. 11 c. 13
Adelaide, 4 t. 8 23
Demerara, 84 carboys 25 34
Superphosphates—
Riga, 400 t. £840
Havre, 22 200
Madras, 10 39
Mauritius, 125 1 c. 414
Tartaric Acid—
Hiogo, 10 c. £62
Fremantle, 1 7
Brisbane, 2 13
Perth, 5 37

LIVERPOOL.

Week ending July 22nd.

Alum—
Puerto Cabello, 2 c. 1 q. £5
Sydney, 2 t. 10
Alexandretta, 6 5 32
Constantinople, 3 5 17
Cape Town, 6 11 2 29
Galatz, 1 9 8
Bourgas, 2 10 11
Varna, 1 15 1 9
Talcahuano, 1 10 7
Halifax, 3 8 3 18
New York, 4 9 3 26
Lisbon, 5 4 3 24
Aluminous Cake—
Calcutta, 14 t. 15 c. 3 q. £65
Montreal, 1 1 1 4
Ammonia (Liquid)—
La Guayra, 2 dms. £5
Oporto, 13 c. 3 q. 15
Ammonium Carbonate—
Genoa, 2 t. £58
Naples, 10 c. 15
B. Ayres, 14 2 q. 21
M. Video, 19 28
Trieste, 1 27
Venice, 10 14
Newfairwater, 17 24
Ancona, 4 7
Vigo, 12 1 18
Odessa 1 30
Ammonium Chloride—
Odessa, 6 t. 17 c. £244
Syra, 14 23
Bremen, 11 14
Barcelona, 1 15 40
Yokohama, 1 1 38
Sydney, 1 21
Antwerp, 1 14 39
Alexandretta, 1 7 43
Smyrna, 2 8 2 q. 86
Montreal, 12 7 248
Fiume, 10 18
Alexandria, 1 33
Leghorn, 2 15 64
Ammonium Sulphate—
Gd Canay, 15 t. 15 c. £132
Las Palmas, 74 8 2 q. 615
Leghorn, 20 7 1 170
Genoa, 10 7 2 85
Palermo, 28 6 2 224
Aniline Salt—
Genoa, 2 t. 9 c. £196
Arsenic—
Vigo, 4 c. 3 q. £6
Barium Chlorate—
Genoa, 5 c. £21
Bleaching Powder—
Alexandria, 3 cks.
Baltimore, 67
Boston, 388
Bremen, 6
B. Ayres, 20 brls.
Calcutta, 126 cs.
Genoa, 71
Havana, 40
Maranham, 10
Montreal, 18
Nantes, 10
Naples, 42
New York, 305
Paris, 17
San Sebastian, 4 14 dms.
Vigo, 12
Boracic Acid—
Antwerp, 4 c. 2 q. £7

Borax—
Hamburg, 3 t. 13 c. £73
Rosario, 3 3
Montreal, 16 17
Barcelona, 4 13 2 q. 94
Danzig, 11 2 920
Melbourne, 10 11
Yokohama, 2 19 2 60
Callao, 1 20
Antwerp, 6 19 3 131
Rotterdam, 20 7 512
Genoa, 12 12 2 139
Stettin, 8 3 2 155
Lima, 4 5

Calcium Chlorate—
Odessa, 10 c. 2 q. £22
Port Natal, 1 t. 1 2

Calcium Chloride—
New York, 9 t. 16 c. 3 q. £21

Ca bolic Acid—
Barcelona, 2 t. 12 c. 1 q. £135
Hamburg, 6 19
Piræus, 5 12
Antwerp, 1 2 1 16
Baltimore, 5 12 269
Cartagena, 2 5
Santander, 1 2 1
40 dms. 120
New York, 8 10 cks. 368
Genoa, 10 38
Hong Kong, 5 9

Caustic Soda—
Alexandria, 40 dms.
Antwerp 18
Amsterdam, 99
Bahia, 75
Baltimore, 50
Barcelona, 76 40 cks.
Bilbao, 330
Boston, 75
B. Ayres, 75
Cartagena (Sp.), 25
Corral, 20
Genoa, 135
Hong Kong, 20
Ibrail, 15
Manaos, 20
Marseilles, 26
Melbourne, 10 20 bxs. 25 pks.
Montreal, 130
Naples, 50
New York, 310 330 brls.
Odessa, 300
Palermo, 10
Paris, 20
Pernambuco, 200
Philadelphia, 50
Pisco, 30
Port Natal, 140 30
Porto Alegre, 100
Quebec, 50
Rio de Janeiro, 3
Rotterdam, 12 5 cks.
Samarang, 100
San Francisco, 435
Santos, 30
Seville, 401 250
Shanghai, 4
Sydney, 43
Stettin, 26
Tampico, 15
Valencia, 45
Varna, 10
Wellington, 35

Chemicals *(otherwise undescribed)*
New York, 5 t. 2 c. £166
Stettin, 6 9
Philadelphia, 13 18 433

China Clay—
Barcelona, 55 bgs.
Bombay, 64 cks.
Boston, 1,020
Calcutta, 130
Maranham, 7 60
Montreal, 130
Naples, 40
Philadelphia, 250
Rio de Janeiro, 30
Rouen, 50

Chlorate of Lime—
Halifax, 8 c. £43

Chloroform—
Vera Cruz, 2 q. £12

Coal Products—
Aniline Colours
New York, 19 cks.
Shanghai, 50 cs.
Aniline Oil
Barcelona, 22 cks.
Genoa, 4 dms.
Aniline Salt
Genoa, 2 cks. 10 cs.
New York 39
Anthracene
Rotterdam, 21 cks.

Creosote Oil
Bordeaux, 150 brls.
Pitch
Antwerp, 420 cks.
Ibrail, 20 brls.
Montreal, 20 kgs.
Valparaiso, 25 25 hf.-brls.
Tar
Ibrail, 20 brls.
Iceland, 10 6 dms.

Cobalt Oxide—
Hamburg, 2 c. £50
Valencia, 1 31

Copper Sulphate—
Odessa, 7 t. 1 c. £119
Bordeaux, 25 2 428
Rouen 7 11 120
Paris, 19 15 1 q. 319
Natal, 14 2 10

Copperas—
Soria, 9 t. 13 c. £7
Varna, 1 6 3 q. 4

Cream of Tartar—
St. John's, 5 c. £26

French Chalk—
Bombay, 3 t.

Gelatine—
Boston, 3 t. 2 c. £526
Las Palmas, 3 bls.

Guano—
Tarragona, 19 t. 18 c. £152

Magnesia—
Marseilles, 14 c. £16
Havre, 2 t. 18 46
Melbourne, 1 15 7

Magnesium Chlorate—
Paris, 10 t. 4 c. £25

Magnesium Sulphate
Rio de Janeiro, 7 t. 10 c. £34
Lisbon, 3 12
Melbourne, 3 11

Oxalic Acid—
Konigsberg, 9 c. 3 q. £12
San Francisco, 2 t. 1 67
Boston, 6 12 211

Paint—
Addah, 18 dms
Adjuah, 5
Antwerp, 51 kgs. 10
Ambriz, 50
Amsterdam, 7 5
Beyrout, 70
Belize, 5 cks. 190 7
Benguela, 50
Boma, 4 14
B. Ayres, 60
Cabenda, 228
Calcutta, 7
Cape Town, 3 cs. 2 170
Curacao, 2 36
Constantinople, 700 9 brls.
Elmina, 1 cs.
Gibraltar, 4 10 dms.
Havre, 4 10 pks.
Hong Kong, 5 tcs.
Ibrail, 3
La Guayra, 235
Lisbon, 200 brls. 4 60 7 dms.
Malta, 10
Maranham, 17 12 3
Marseilles, 6 100 bgs.
M. Video, 14 22 cs.
Montreal, 30
New York, 150
Para, 23 50
Port Natal, 10
Port Said, 4
St. Thomas, 7
San Juan, 24
Sulina, 3
Talcahuano, 20 brls.
Tampico, 4 14 cs.
Teneriffe, 3
Tripoli, 15

Painters' Colours—
Bombay, 5 cs.
Odessa, 34 cks.
Penang 50 dms.
Philadelphia, 15 kgs. 101 brls.
Port Natal, 50
Rotterdam, 37
Savanilla, 12
Sierra Leone, 98
Sydney, 16
Valparaiso, 3 cs. 31 16 cms. 150
Yokohama 8

Paraffin Wax—
Fiume, 10 bgs.
Maranham, 2 cs.
Rio de Janeiro, 8
Smyrna, 5
Trieste, 10 cks.

Phosphorus—
Sourabaya, 3 c. £38
Tampico, 5 53
B. Ayres, 12 2 q. 110

Potash—
B. Ayres, 2 t. 9 c. £29
Lagos, 18 20
Guayaquil, 2 1 q. 9

Potash Salts—
Corinto, 2 t. 3 q. £259

Potassium Bichromate—
Vera Cruz, 19 c. 3 q. £42
Constantinople, 6 t. 4 261

Potassium Chlorate—
Philadelphia, 2 t. 10 c. £94
Hiogo, 12 10 486
Genoa, 7 14
New York, 7 15 292
Boston, 3 15 141
Sydney, 3 10 137

Potassium Chromate—
Hong Kong, 4 c. £10

Potassium Prussiate—
Genoa, 1 t. 13 c. £100

Salt—
Accra, 17 t. 10 c.
Akassa, 10
Algoa Bay, 9
Antwerp, 500
Baltimore, 150
Boston, 600
B. Ayres, 12
Calcutta, 7,963
Cameroons, 55 2
Cape Coast, 10
C. C. Castle, 25
Fuca, 20
Ghent, 105
Hamburg, 110 10
Iceland, 391
Kingston, 10 cs.
Lagos, 200
Matadi, 11 9
Melbourne, 325
Montreal, 927
N. Orleans, 250
Newcastle, 40
New York, 32 7
Noqui, 20
Old Calabar, 286
Para, 489 13
Rangoon, 1,295
Rio de Janeiro, 11
Rotterdam, 360
St. Petersburg, 160
Salt Pond, 62 10
Sapeli, 2
Sette Camma, 15
Sydney, 70
Talcahuano, 6 5
Tampico, 11
Thorshaon, 103
Trangisvaag, 200
Trinidad, 10 11
Ukaka, 18 13
Valparaiso, 100
Westervik, 500

Salt Cake—
New York, 4 t. 12 c. £73

Saltpetre—
San Francisco, 1 t. 5 c. £29
Maranham, 5 6
Para, 2 48

Satinite—
Stettin, 11 t. 4 c. £30

Sheep Dip—
Calcutta, 18 c. £20
Montreal, 1 t. 3 22
B. Ayres 25 577
Algoa Bay, 13 3 q. 25

Soap—
Accra, 220 bxs.
Adjuah, 100 10 cs.
Algoa Bay, 503 100
600 brls.
Alexandria, 16
Antwerp, 440
Axim, 40
Bermuda, 70
Barbadoes, 1,100
Bluefields, 250
Bombay, 40
Calcutta, 500 bdls.
Canona, 450
C. C. Castle, 200
Cape Town, 1,700
Degama, 100
E. London, 1,695 10 37
Eskefjord, 70 fkns.
Gibraltar, 110
Guayaquil, 200
Java, 1,050
Karachi, 800 30
Kingston, 2,025
Lagos, 139 161
Madras, 27
Lowe, 50
Manaos, 450
Mauritius, 1,358
Monrovia, 32
Mossel Bay, 200
N. Orleans, 100
New York, 300 23 bdls.
Old Calabar, 2,000
Opobo, 1,080
Para, 300
Pt. Elizabeth, 500 500
Pt. Natal, 6,295 60 100
Rangoon, 7
Rotterdam, 540
St. John's, N'fd., 545
St. Thomas, 300 532 brls.
Salonica, 27
Savannah, 30
Savanilla, 5
Shanghai, 40
Sierra Leone, 99
Singapore, 100 338
Valparaiso, 92
Winnebah, 100

Soda Alkali—
Lisbon, 35 brls.
Messina, 35
Odessa, 50
Vigo, 18

Soda Ash—
Ancona, 40
Antwerp, 110
Boston, 137 cks. 1,444
107 tcs.
B. Ayres, 550
Calcutta, 100
Corral, 5
Hiogo, 158
Maranham 20 20 brls.
Melbourne, 21
M. Video, 30
Montreal, 41 kgs. 140
22 cks. 400
New York, 108 tcs.
Parnahyba, 20 brls.
Piræus, 40
Rio de Janeiro, 150
Rotterdam, 4
San Francisco, 200
Valparaiso, 30
Yokohama, 658

Soda Crystals—
Alexandria, 39 brls.
Bilbao, 9 cks.
Boston, 280
B. Ayres, 20
Cape Town, 75
Malta, 50
M. Video, 67
Montreal, 125 kgs.
New York, 280 cks.
Penang, 15
Pt. Natal, 60 kgs.
Pt. Said, 30
San Francisco, 300
Valparaiso, 100

Sodium Arseniate—
Santos, 4 cks.

Sodium Bicarbonate—
Alexandria, 13 brls.
Antwerp,
Barcelona, 175 kgs.
Beyrout, 30 10
Bombay, 500
Boston, 100
B. Ayres, 25
Calcutta, 500
Callao, 5
Marseilles, 10
M. Video, 20
Montreal, 60
Nagasaki, 250
Paris, 110
Pt. Natal, 40
Rangoon, 50
San Francisco, 200
Seville, 59
Smyrna, 20
Sydney, 140
Venice 10
Wellington, 373 18

Sodium Bichromate—
Salonica, 14 brls.

Sodium Carbonate—
Boston. 56 brls.
Porto Alegre, 20 kgs.

Sodium Chlorate—
Bremen, 100 kgs.
Dantzic, 10

Sodium Hyposulphite —
San Francisco, 350 kgs.
Sodium Nitrate—
Melbourne, 50 bgs.
Sodium Silicate—
Bombay, 20 cks.
Cartagena, N.G., 10 brls.
Rotterdam, 6
Vigo, 18
Sodium Sulphate—
Piræus, 4 t. 19 c 1 q. £10
Montreal 5 10
New York, 27 13 48
Hamburg, 16 brls.
Sulphur—
Maranham, 9 c. 3 q. £3
Cape Town, 1 t. 17 5 11
Boston, 232 19 756
Montreal, 190 1 548
Para, 6 3
Sulphuric Acid —
Maranham, 1 t. 10 c. £17
Superphosphates—
Gd. Canary, 9 t. 5 c. £32
Yarnish—
B. Ayres, 5 cs.
Genoa, 4 cks. 6 brls.
St. John's, N'fd., 1
Venice, 1 tin
Whiting—
Maranham, 20 cks
Zinc Chloride—
Boston, 15 c. 2 q. £12

MANCHESTER.

Week ending July 22nd.

Alum—
Rouen, 4 cks.
Alumina Acetate—
Rouen, 10 brls.
Benzine—
Christiania, 1 ck.
Benzol—
Rotterdam, 45 cks. 20 dms.
Bones—
Treport, 159 bgs.
Borax—
Boulogne, 3 cks.
Carbolic Acid—
Treport, 180 btls.
Extracts—
Rouen, 11 cks.
Glue—
Rotterdam, 20 cks.
Lead Nitrate—
Rouen, 1 ck.
Oxygen —
Treport, 62 tubes
Potassium Bichromate —
Boulogne, 1 ck.
Potassium Chlorate—
Rouen, 4 cks
Potassium Prussiate—
Rouen, 2 cks.
Sodium Bicarbonate
Treport, 75 pks.
Tar—
Treport, 30 cks.
Tar Oil—
Treport, 2 dms.
Antwerp, 6
Tartaric Acid—
Rotterdam, 2 cks.
Toluol—
Rotterdam, 20 dms.
Varnish—
Barcelona, 2 dms.

HULL.

Week ending July 18th.

Ammonium Sulphate —
Bremen, 4 cks. 7 kgs.
Benzol—
Amsterdam, 25 cks. 12 dms.
Bleaching Powder—
Bombay, 27 dms.
Carbolic Acid—
Rotterdam, 25 cks.
Caustic Soda—
Hango, 16 cks.
Chemicals (*otherwise undescribed*)
Abo, 15 cks.
Bombay, 42 120 pks.
Bremen, 26
Bordeaux, 20 cs.
Christiania, 26
Copenhagen, 3 90
Gothenburg, 40 14 5
Hamburg, 20 92
Hango, 1
Kurrachee, 594 220
New York, 47 10
Riga, 31
Rotterdam, 24 146 5
Stettin, 2
Coal Products (*otherwise undes.*)—
Bremen, 6 cks.
Cottonseed Oil—
Amsterdam, 824 c.
Antwerp, 2,290
Bremen, 220
Christiania, 73
Dunkirk, 101
Gothenburg, 100
Hamburg, 873
Rotterdam, 729
Stettin, 168
Creosote—
New York, 250 brls.
Dyestuffs (*otherwise undescribed*)
Amsterdam, 29 cks.
Antwerp, 3
Rotterdam, 48
St. Petersburg, 70
Glue—
Ghent, 100 bgs.
Linseed Oil—
Amsterdam, 104 c.
Antwerp, 10
Bombay, 443
Bordeaux, 35
Christiania, 917
Copenhagen, 47
Christiansand, 35
Christiansund, 42
Drontheim, 153
Hamburg, 197
Kurrachee, 46
Rotterdam, 139
Manure—
Dunkirk, 3,248 bgs. 500 cks.
Hamburg, 50 t.
Venice, 2,574
Mineral White—
Hamburg, 20 cks.
Harlingen, 50 bgs.
Naphtha—
New York, 15 dms.
Ochre—
Hamburg, 46 cks.
Painters' Colours—
Amsterdam, 30 cks.
Antwerp, 46 1 cs.
Bombay, 54 85 360 pks.
Bremen, 1
Bordeaux, 20
Christiania, 2 111
30 dms.
Copenhagen, 4 2 3
10 dms.
Dunkirk, 29
Drontheim, 2
Ghent, 39 7
Gothenburg, 55
18 dms.
Hamburg, 7 4
Kurrachee, 2 14
Konigsberg, 5
New York, 202 170 45
Riga, 1
Rouen, 6
Rotterdam, 27 7
St. Petersburg, 31
Stettin, 10 1
Pitch—
Antwerp, 178 t.
Kurrachee, 210 cks.
Starch—
Copenhagen, 130 cs.
Stearine—
Christiania, 2 cks.
Tar—
Abo, 40 cks.
Antwerp 6
Dunkirk, 55
Hamburg, 10
Rotterdam, 3
Selsaete, 120 t.
Stettin, 11
Toluol—
Amsterdam, 25 cks.
Rotterdam, 24 brls.
Treacle—
Amsterdam, 1 kg.
Yarnish—
Bombay, 30 dms.
Bremen, 2 cs.
Hamburg, 3
Stettin, 12 cks.

GLASGOW.

Week ending July 23rd.

Ammonium Sulphate—
Genoa, 58 t. 2 c.
Palermo, 9 2
Carbolic Acid—
Christiania, £16
Chemicals (*otherwise undes.*)—
Rangoon, £28
Coal Products—
Tar
Rangoon, £28. 15s.
Riga, 300 brls.
Hamburg, 9 t. 14 c.
Tar Oil
Hamburg, 11 c.
Coal Products (*otherwise undes.*)—
Rotterdam, £470
Extracts—
Stavanger, £10. 18s.
Linseed Oil—
Bermuda, 1 t. ¾ c.
Paint—
Hong Kong, £86
Jamaica, 3 t. 2½ c.
Painters' Colours—
Rangoon, £82
Bermuda qty.
Paraffin Wax—
Leghorn, £34
Christiania, 75
Riga, 21 t. 10 c.
Bordeaux, £4. 19s.
Potassium Bichromate —
Genoa, £98
Rotterdam, 395
Rosin Oil—
Christiania, £13. 16s.
Salt—
Rangoon, 14 c.
Sheep Dip—
B. Ayres, £257
Soap—
Rangoon, 13 c.
U.S.A., 1 t. 2
Sodium Bichromate—
Genoa, 3 t. 2¼ c.
Sulphuric Acid —
Rangoon, £2,908
Tallow—
Rotterdam, 10 t. 5 c.
Treacle—
Christiania, 13 t. 13½ c.
Bergen, 1 4
Stockholm, 12 2
White Lead—
Rangoon, £20

TYNE.

Week ending July 18th.

Alkali—
Amsterdam, 11 t. 16 c.
Reval, 73 11
Ammonium Carbonate—
Randers, 5 c.
Ammonium Chloride—
St. Petersburg, 11 t. 2 c.
Antimony—
Rotterdam, 1 t. 10 c.
Barium Binoxide—
Hamburg, 1 t. 9 c.
Barium Carbonate —
Antwerp, 20 t. 9 c.
Bleaching Powder—
St. Petersburg, 99 cks.
Odense, 11 t. 6 c.
Gothenburg, 15 10
Rotterdam, 23 13
Amsterdam, 11 15
Reval, 55 4
Christiania, 14 6
Bergen, 2 2
Antwerp, 14 19
Hamburg, 4 18
Castor Oil—
Hamburg, 2 q.
Caustic Soda—
Christiania, 2 t. 18 c.
Gothenburg, 4 18
Rotterdam, 10 3
Reval, 5 8
Antwerp, 4 18
Hamburg, 11 9
Bergen, 1 4
Chemicals (*otherwise undescribed*)
Bergen, 18 c.
Creosote Oil—
Trieste, 8 c.
Litharge—
Stockholm, 3 t. 13 c.
Amsterdam, 1 9
Magnesia—
Antwerp, 5 c.
Hamburg, 6
Manure—
Valencia, 79 t.
Ochre—
Christiania, 1 t. 18 c.
Paint—
Christiania, 6 c.
Trieste, 3 t.
Rotterdam, 10
Antwerp, 1
Hamburg, 1 6
Bergen, 2
Soap—
Hamburg, 1 q.
Bergen, 2
Soda—
Copenhagen, 3 t. 10 c.
Gefle, 15 8
Rotterdam, 10
Amsterdam, 40
Bergen, 10 10
Christiania, 17 10
Antwerp, 5 3
Hamburg, 2
Sodium Sulphate—
Nassundet, 252 t.
Antwerp, 50 2 c.
Sulphur—
Antwerp, 25 t. 4 c.
Tallow—
Hamburg, 2 q.
Treacle—
Hamburg, 1 q.
Turpentine—
Hamburg, 2 q.
Varnish—
Hamburg, 1 q.
White Lead—
Narva, 10 c

GOOLE.

Week ending July 15th.

Chemicals (*otherwise undescribed*)
Antwerp, 1 ck.
Harlingen, 1
Calais, 46
Coal Products (*otherwise undes.*)—
Antwerp, 1 ck. 7 dms.
Boulogne, 51 5 cs. 1 pk.
Ghent, 12 tins
Hamburg, 2
Rotterdam, 99 2
Colours—
Amsterdam, 2 cks.
Boulogne, 2 cs.
Dyestuffs (*otherwise undescribed*)
Ghent, 1 ck
Hamburg 12 40 bgs.
Manure—
Dunkirk, 118 bgs.
Rotterdam, 270
Soap—
Antwerp, 1 cs.
Ghent, 1

GRIMSBY.

Week ending July 18th.

Alkali—
Hamburg, 10 cs.
Chemicals (*otherwise undescribed*)
Rotterdam, 37 dms.
Coal Products (*otherwise undes.*)—
Dieppe, 87 cks.
Colours—
Antwerp, 1 cs.
Dieppe, 10 cks. 1
Hamburg, 2 1
Rotterdam, 2

PRICES CURRENT. WEDNESDAY, JULY 29TH,

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 °/, and 40 °/, ...per cwt.	5/9 & 8/9		
,, Glacial.. .. .. ,,	40/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/,) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B.. .. .. per lb.	0	0	2¾
,, =24° B.. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate.. .. .. per ton	21	15	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/-& 35/-		
,, Nitrate.. .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	5
,, Sulphate (grey) London .. .. .. per ton	8	0	0
,, ,, (grey) Hull .. .. ,,	7	17	6
Aniline Oil (pure) .. .. per lb.	0	0	8¼
Aniline Salt ,, ... ,,	0	0	7¾
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide).. .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	0	0
Chromium Acetate (crystal).. .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	3	1
,, 50/90 ,, ... ,,	0	2	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7¼
,, (crude 60°) .. .. per gallon	0	2	2
Creosote (ordinary).. .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	10
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston.. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	5
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	48	10	0
,, Sulphate .. .. ,,	16	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°).. .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	5	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	23	0	0
,, ,, brown ,,) .. .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	19	0	0

	£		
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1	1	
,, Calcined Magnesia .. .. per ton.	8	1	
,, Sulphate (Epsom Salts) .. .. .. per ton	2	1	
Manganese, Sulphate .. .. ,,	17		
Borate .. .. per cwt.	2	1	
,, Ore, 70 % .. .. per ton	3	1	
Methylated Spirit, 61° O.P. .. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils:—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	18	1	
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	21		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. ..nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	1	
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	1	
,, ,, (Caustic Potash) 75/80 % .. ,,	20	1	
,, ,, (Caustic Potash) 70/75 % .. ,,	19	1	
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3	1	
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	1	
,, Muriate, 80 % (do.) .. .. .. ,,	8	1	
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4	1	
,, ,, (Caustic Soda-ash) 48 % + ,, ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,, f.o.b.	4		
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	1	
,, ,, (Soda Crystals) .. .. .. ,, ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14	1	
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton.	20		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda)(f.o.b.)net pr. ton	9	1	
,, ,, (74 % Caustic Soda) ,, ,, ,, 10 ton lots	8	1	
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	1	
,, ,, (60 % Caustic Soda) .. ,, ,,	6	1	
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	
,, Bicarbonate .. .. ,,	6	10	
,, Hyposulphite .. .. ,,	5	10	
,, Manganate, 25%.. .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. ..per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	30	0	
,, Phosphate .. .. ,,	12	15	
,, Silicate (glass) .. .. per ton	4	10	
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	
,, Stannate, 40 % .. .. per cwt.	3	2	
,, Sulphate (Salt-cake) .. .. per ton.	1	2	
,, ,, (Glauber's Salts) .. .. ,,	1	10	
,, Sulphide .. .. ,,	6	15	
,, Sulphite .. .. ,,	5	0	
Strontium Hydrate, 100% .. .. ,,	5	0	
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	
,, Barium, 95 %.. .. .. ,,	0	0	
,, Potassium .. .. ,,	0	0	
Sulphur (Flowers) .. .. per ton.	6	5	
,, (Roll Brimstone) .. .. ,,	5	10	
,, Brimstone: Best Quality .. .. ,,	4	0	
Superphosphate of Lime (26% .. .. ,,	2	17	
Tallow .. .. ,,	18	10	
Tin Crystals .. .. per lb.	0	0	
,, English Ingots .. .. per ton	64	10	
Zinc (Spelter) .. .. ,,	17	12	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	

THE

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THE GREAT UNKNOWN IN SCIENCE.

THOUGH strictly speaking no good, honest work is wasted, yet it must be admitted that in a great many cases much that might be of service is rendered nugatory by obscurity. There is a vast amount of useful work executed in the field of science every year, a good deal of which only reaches the ears, or comes under the eyes of a few of the seekers after knowledge. There are many French and German publications devoted to original research work, but even these are inadequate because they are costly, and the task of searching through the masses of irrelevant matter is a laborious and time-consuming process for those who seek information on some specific subject. The idea of an index naturally suggests itself, and in a scrappy sort of way many individual efforts have been made to compile some such key to current scientific papers. The Royal Society's Catalogue and the "Year Book of Science" are typical examples of the outcome of these endeavours, but the net result is that, to obtain anything like a full and complete acquaintance with contemporaneous research, it is necessary to get together quite a collection of such books in all tongues.

Seeing how great is the task—in fact we may advisedly say how colossal—it is not at all surprising that chaos has only been reduced to order to such a limited extent. The wonder rather is that recent efforts should have progressed so far.

They have, however, most assuredly done excellent work, in that they have made conspicuous the futility of endeavouring to cope with the task piece-meal. That is to say through the agency of a number of non-co-operative and segregated compilers, for of course the successful completion of the entire task can only be compassed by a very extensive application of the principle that "many a mickle makes a muckle."

An effort to accomplish the compilation of an International catalogue of scientific literature is therefore now being made. The chief instrument in this work has been the Royal Society, under the auspices of which an International conference was recently held. The conference was emphatically representative, since influential and eminently qualified delegates attended from Austria, Belgium, Canada, Cape Colony, Denmark, France, Germany, Greece, Hungary, India, Italy, Japan, Mexico, Natal, The Netherlands, Norway, New South Wales, New Zealand, Queensland, Sweden, Switzerland, and the United States; the delegates from Brazil, Portugal and Russia alone having been unable to attend at the last minute. Throughout, the proceedings were characterised by striking unanimity of purpose, which augurs well for the future. With the exception of the question of classification—which veritably bristles with difficulties—there were scarcely two divergent expressions of opinion, while the subject of classification has wisely been referred to a special committee of organization, to be dealt with while the other branches of the task are progressing.

Many important executive arrangements connected with the compilation, editing and publication of the catalogue were determined on, and though we cannot deal with them in detail here, the importance of the matter justifies, we think, a full record of what is known so far, about the precise scope and nature of the catalogue itself. In the first place, a contribution to science for the purposes of the catalogue is to be considered to mean a contribution to the mathematical, physical, or natural sciences, such as, for example, mathematics, astronomy, physics, chemistry, mineralogy, geology, botany, mathematical and physical geography, zoology, anatomy, physiology, general and experimental pathology, experimental psychology and anthropology, to the exclusion of what are called the applied sciences—the limits of the several sciences to be determined hereafter. Moreover, the catalogue is to comprise all published original contributions to the branches of science indexed, whether appearing in periodicals or in the publications of societies or as independent pamphlets, memoirs, or books. With regard to classification, the adoption of a dual system giving both the subject matter and the authors' names has been agreed upon.

The catalogue will in the first place be issued from the beginning of 1900, in the form of slips or cards as promptly as possible, and cards corresponding to any one or more branches of science, or to sections of such sciences, are to be furnished to subscribers under the direction and at the discretion of the central bureau, London. The catalogue is also to be issued from time to time in book form in parts corresponding to the several branches of science.

Though English is to be the language in which the catalogue will be printed, still the names of authors and titles will be given in the original languages, subject to certain reservations to be determined by the International Council. One of these is that in the catalogue of authors' names a title originally published, say in either English, French or German will not be translated, but one published in Japanese or Russian will.

Perhaps the most important and effectual provision is that referring to the indexing of the subject matter. In so doing, regard is to be had not only to the *title* of a paper or book, but also to the nature of the contents. It is in this particular respect that great things are to be hoped for. The great dramatist's conclusions concerning the value of a name, may hold good for a rose, but we think that if those who have had occasion to search scientific papers for information were asked "what's in a name" (or title), they would be ready with a rejoinder to the effect that very often there is a great deal more than in the paper itself.

Legal Intelligence.

THE LAW COURTS, DUBLIN.

(Before the Master of the Rolls)

T. G. WEBB *v.* KYNOCK & CO., LTD.

This case, which came on for hearing on Friday, July 31st, was an application on the part of the plaintiff, who resides in Market-street, Manchester, for an injunction to restrain the defendents from working, or continuing to work, pending the trial of the action, a machine or apparatus for concentrating sulphuric or other acids, which had been erected by them at their recently erected cordite factory in Arklow, or any other apparatus which should infringe certain patent rights claimed by the plaintiff. The plaintiff had, in 1891, patented an apparatus for the concentration of sulphuric and other acids by a continuous process

Mr. Dunbar Barton, Q.C., M P, with whom was Mr. Alexander Blood (instructed by Messrs Milward, Jones and Cameron on the part of the plaintiff) moved for the injunction.

Mr. Meredith, Q C, with whom was Mr. Robert Doyle (instructed by Messrs. Casey and Clay on the part of the defendants), said they were willing to undertake to keep an account of their use of the process for the concentration of sulphuric acid, and also to give the plaintiff inspection of their premises upon the terms of the motion being allowed to stand over until October next.

Mr. Barton, Q C, said he was willing to agree to those terms provided an immediate inspection were granted to Mr. Webb, who was desirous of returning to Manchester.

These terms were agreed to, and at the suggestion of his Lordship was arranged that the inspection should be made on Saturday.

THE WEIGHTS AND MEASURES (METRIC SYSTEM) BILL.

THE Government bill to legalise the use of weights and measures of the metric system, is a very short one. The clauses are as under:—

1. (1) Notwithstanding anything in the Weights and Measures Act, 1878, the use of a weight or measure of the metric system in trade shall be lawful, and nothing in section 19 of that Act shall make void any contract, bargain, sale, or dealing by reason only of its being made or had according to weights or measures of the metric system. (2) No person using or having in his possession a weight or measure of the metric system shall not by reason thereof be liable to any fine. For the third schedule to the Weights and Measures Act, 1878, shall be substituted the schedule to this Act.

2 Section 38 of the Weights and Measures Act, 1878, is hereby repealed, and the Board of Trade shall verify copies of metric standards in the same manner as if they were copies of Board of Trade standards, and the provisions of that Act relating to the verification of such standards shall apply accordingly.

3. In section 40 of the Weights and Measures Act, 1878, the expression "local standards of weights and measures" shall include local metric standards, and the provisions of that Act relating to such standards shall apply accordingly.

4. This Act may be cited as the Weights and Measures (Metric System) Act, 1896, and may be cited with the Weights and Measures Acts, 1878 to 1893.

FATALITY AT A GLASS WORKS.—Whilst William Morrow, thirty-five, was resting himself at the back of a furnace in the glass works of Paul and Company, Broad-street, Glasgow, on Monday, "metal" in the furnace broke away and completely surrounded the place where he sat The other workmen looked on helplessly as the boiling "metal" gradually covered him. His body was burnt to cinder.

HORSEFLESH IN PARIS.—Previous knowledge about the consumption of horseflesh in Paris will have prepared readers for the statement that in 1895 the number of horse butchers' shops in the city had risen to more than 30,000. The Briton may shrug his shoulders but, after all, diet is largely a matter of training and tradition. Li Hung Chang, who is now our guest, delights in his birds' nest soup and other dishes which to us seem so extremely unpleasant, while the South African native, who will relish a roasted snake, shudders at the thought of the white men eating eels.

DO YOU WANT TRADE IN SOUTH AMERICA AND MEXICO? The Commercial Intelligence Department of the Associated Trade and Industrial Press, nine years established, at 610, 13th street, Washington, D.C., U S.A., has compiled from first sources a list of the leading Druggists and Chemists, in Mexico, Central and South American countries, which will be sent on neatly type-written sheets to any address on receipt of postal or money order for five shillings, or its equivalent in the money of any other country This is an opportunity at trifling cost to pave the way towards new commercial connections in Spanish America.

PROGRESS IN THE KENT COALFIELDS.—One who has visited the scene of operations in connection with the sinking of the coalpit at Dover states that the shaft has now reached a depth of nearly 1,100 ft. This is reckoning from the base of the cliff, which is about 300 ft. The work is being conducted under the direction of experienced Durham men from the North of England, and progresses at the average rate of 4 ft per day. The pit is to be bricked in, and this part of the work has just been commenced. The shaft is now being sunk through the gault chalk, which is blasted to facilitate operations. One satisfactory feature is that scarcely any water finds its way into the pit. The seam of coal struck in the experimental boring close by was at a depth of 1,100 ft, and according to the present rate of progress it is calculated that this depth will be reached by about next April or May. The work is now carried on continuously throughout the twenty-four hours—three shifts working eight hours each. The *débris* from the shaft is being deposited on the foreshore, so as to reclaim an additional area of land alongside the South-Eastern railway.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Salts of Sodium and Potassium. Thos. Parker. 15,999. July 20.

Utilizing Peat by Neutralising the Organic Acids therein. J. Patison 16,003. July 20.

Recovering Sugur from Molasses by means of Barium Hydroxysulphide and Obtaining Bye-products. W. Feld. 16,009. July 20

Sewage Treating Apparatus. E. W. Ives. 16,034. July 20.

Explosives. E. Kubin. 16,038. July 20.

Electrolytic Apparatus. C. Kellner. 16,057. July 20.

Soap and Caustic Soda. C. H. Simpson and F. H. T. Allan. 16,128. July 21.

Purifying Spent Lyes. C. H. Simpson and F. H. T. Allan. 16,129. July 21.

Manufacture of Cyanides. J. A. Wanklyn and W. J. Cooper 16,146. July 21.

Improvements in Coke Ovens. N. B. Taylor and J. C. Dias. 16,157. July 21.

Carbides of the Alkaline Earth Metals. L. M. Bullier. 16,255. July 22.

Manufacture of Lead Oxide. A. Gutensohn. 16,276. July 22.

Sewage Treating Apparatur. W. D. Scott-Moncrieff. 16,280. July 23.

Recovering Zinc Oxide from Solutions. A. M. Clark. 16,312. July 23.

Apparatus for Administering Oxygen Gas, etc. The Manchester Oxygen Company and W. M. Jackson. 16,392. July 24.

Extracting Sugar from Molasses by Bariuui Hydroxysulphide and Recovering the latter. W. Feld. 16,441. July 24.

Solidifying Petroleum. M. E. Renberg. 16,541. July 25.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Apparatus for Softening and Purifying Water. O. Guttmann, 12, Mark-lane, E.C. Eng. Pat. 11,739. May 29, 1896.

When lime water is used it is prepared in a separate tank. With carbonate of soda, etc., the softening agent is added to the feed tank directly. Several methods of proportioning the quantity of the softening agent to the water being treated are described. The feed tank is fitted with a silent heater, so that the water can be warmed if necessary. The treated water flows from the feed tank by an overflow pipe into a filter, which takes the form of a long, narrow trough-shaped channel, with a horizontal top, but an inclined bottom. It is divided into compartments, which are filled with wood-wool, held down by lattice work. The partitions are so fixed that the water passes alternately up and down the compartments. The last compartment is fitted with cocoanut matting screens, which finally filter the water before it passes to the mains or storage tanks. The wood-wool can be removed and cleansed without stopping the filter.

Improvements in the Process and Apparatus for the Production of Calcium Carbide. R. P. Pictet, Geneva, Switzerland. Eng. Pat. 9,358. May 7, 1896.

The chief object is to provide a furnace in which electrical energy is only required to complete the reaction between the lime and carbon. In the usual way the heat necessary to bring the mixture up to 2500° to 2800°C, which is about the reaction temperature, causes the expenditure of electrical energy to little purpose. The patentee's furnace is worked in zones of varying temperature. It is U-shaped, and lined with refractory bricks. The mixture of coke and lime is constantly fed into the top, and heated by an air-blast through tuyeres situated round the circumference at a depth of about one-third the total depth of the furnace. As the mixture passes to the lower zone a oxygen-hydrogen blast is injected through another set of tuyeres, and the mixture is raised to about 2000°C. In the lowest zone the partially fused mass comes under the influence of an electric arc, and is raised to about 3000°C, the fused carbide flowing away by an outlet in the bottom of the furnace. The orifice of this outlet is raised above the level of the dip of the U, so that only the excess carbide escapes, the rest forming a molten bath, which protects the bottom and nethermost sides of the furnace against the extreme temperature to which they are exposed.

Improvements in or Relating to the Treatment or Utilization of Kelp Liquor. J. W. Stevens, The Oaks, Horley, Surrey. Eng. Pat. 15,807. August 22, 1895.

In addition to iodine, chlorates of potassium and sodium are obtained. The kelp is broken to about the size of road metal, and lixiviated in the usual way. The first liquor containing the bulk of the iodine is boiled down to 1·3 sp. gr., thus precipitating the sulphate of potassium. It is then run into crystallizing vats, whereby the greater part of the potassium chloride is removed, the remainder being got rid of by further concentration and subsequent crystallization. This concentrating and salting-out process is continued until all the soda and potash compounds are removed, and the iodine liquor strong enough for the customary distillation process with manganese dioxide and vitriol. The recovered chlorides of potassium and sodium are usually used to raise the specific gravity of the secondary and subsequent liquors from the lixiviating vats. These are carefully neutralized with HCl, the small amount of sulphur set free being filtered off, and the sulphate of potassium removed by concentration. The resulting liquor is subjected to electrolysis, the bulk of the chlorides being thereby converted into chlorates, and the traces of iodides and bromides into iodates and bromates. When the electrolytic treatment has been sufficiently prolonged, the etectrolyte is run off in crystallizers, and the chlorates obtained. The mother liquor is re-saturated, and this cycle continued until the liquor contains a fair percentage of iodates and bromates. These are then reduced with sulphurous acid, and stilled off in the usual way.

Process for Hardening Chrome-Dressed Leather. Dr. K. Moeller, Brockwede, Westphalia, Germany. Eng. Pat. 11,695. May 29, 1896.

The tanned and soaked chrome-dressed leather is heated in a bath of water to 100°C, or an approximate temperature above 80°C. A molecular change ensues which hardens the leather, without rendering it brittle, in a manner specially suited for the preparation of sole and trunk leathers. To avoid the tendency to curl up during the treatment, the leather is stretched on spring frames, which prevent curling and yet allow the leather to contract and harden.

THE HEATH TOWN SEWAGE SCHEME.

MAJOR-GENERAL H. D. Crozier, R.E, held an inquiry last week at the Heath Town Congregational Schools, relative to an application by the Heath Town Urban Council to the Local Government Board for permission to borrow £12,000 for sewage works.—Mr. R. C. E. Plumptre appeared on behalf of the Heath Town Council, and a number of gentlemen were present to represent various owners of land in the neighbourhood.—Mr. Alfred Young (barrister), who attended to defend the interests of the trustees of Mr. L. Moreton, at the opening of the inquiry intimated that an arrangement had been entered into, and that all opposition would be withdrawn. It was explained that this decision would remove much of the opposition by the Bushbury Council.—Mr Plumptre then laid the case for the Council before the inspector. He said that for some time past there had been considerable complaints with regard to sewage matter being sent down the Smestow Brook, and a scheme had been prepared by Mr. Berrington, of Wolverhampton, which dealt with the whole area of Heath Town, which in round figures was 738 acres. The last census showed that the population was 7,075, the number of houses 1,647, and the assessable value £11,733. For the purposes of the sewage scheme the district would be divided into two parts, one portion of the sewage being dealt with at Moseley village, and with regard to which there was no opposition. With regard to Heath Town proper, it was intended to allow the sewage to gravitate on to land at Coven, which was in the rural district. Subsidence tanks would be erected, and the scheme would be of the greatest advantage to the Bushbury authorities.—Dr. Reid (the county medical officer) said he had inspected the land at Coven, and found that it would answer the Council's purposes, on certain conditions. Success could only be obtained if the authorities assumed the direct management of the land. He was of the opinion that the quantity of land about to be acquired would be sufficient. Several witnesses were called, and the inspector then proceeded to Coven to view the ground.

A POLLUTED BROOK.—At the Coventry Petty Sessions, last week, the Coventry Corporation summoned the Foleshill Rural District Council for polluting the Springfield Brook. The Town Clerk (Mr. L. Beard) appeared for the complainants, and Mr. A. P. Oswin (clerk to the Rural District Council) appeared for the defence. The case had been several times before the Court, and adjournments had been granted to enable the defendants to abate the nuisance. The Bench decided to hear the case, and the Town Clerk said there had been considerable nuisance from this brook, and the Rural District Council had promised to abate the same. They had erected certain works, but they had not abated the nuisance. He called Mr. W. H. Clarke, inspector of nuisances to the city, who said that two sewers emptied into this brook, and had been a great nuisance. He submitted samples of water taken from the brook. The works were insufficient to abate the nuisance. For the defence Mr. Oswin called witnesses, who said the works were quite adequate for the brook. The bench decided that defendants must abate the nuisance, and ordered them to pay the costs of the case.

AMMONIA ICE-MAKING, AND REFRIGERATING PLANT.

THE Sheffield Pure Ice and Cold Storage Company, of Pond-street, Sheffield, ordered last year from the Pulsometer Engineering Co., of Nine Elms, London, S.W., a large ice-making and cold storage plant, and we are now able to give a few particulars as to the construction and working of the same.

It was required by the contract that the plant should produce not less than 20 tons of hard transparent ice every 24 hours, in blocks weighing about 5 cwt., and of a thickness of not less than 12 ins., and this with condensing water at a temperature of 68° Fahr.

The machine had also to maintain continuously 70,000 cubic feet of cold storage space at a temperature not exceeding 21° ; the coal consumption had also to be guaranteed.

On a trial trip which extended over two months, we understand that the output was considerably in excess of the amount stated in the contract, while the coal consumption was less.

The ammonia pumps, which are of the contractors' latest are of the double acting type, and are cast in special metal, as being fitted with special suction and discharge valves without s

The gas condenser is placed above the engines in a large iron tank, and consists of extra heavy wrought iron tube, tested lbs. per square inch. The connecting branches and tees of this co are made of wrought iron wherever they come in contact with a

On the engine room floor, in a wrought iron tank carefull with charcoal and wood, are placed the refrigerators, so as to to the ammonia pumps These refrigerators are also of extr pipe, and the couplings and tees are also made of wrought iron

Between the ammonia pumps and refrigerators are placed t steel receivers. These are made from mild steel and welded usual cast iron receivers being entirely dispensed with, on ac the risk attaching thereto.

The illustration (Fig. 1) gives a very fair idea of the engi pumps. The auxiliary engine is used for driving the various

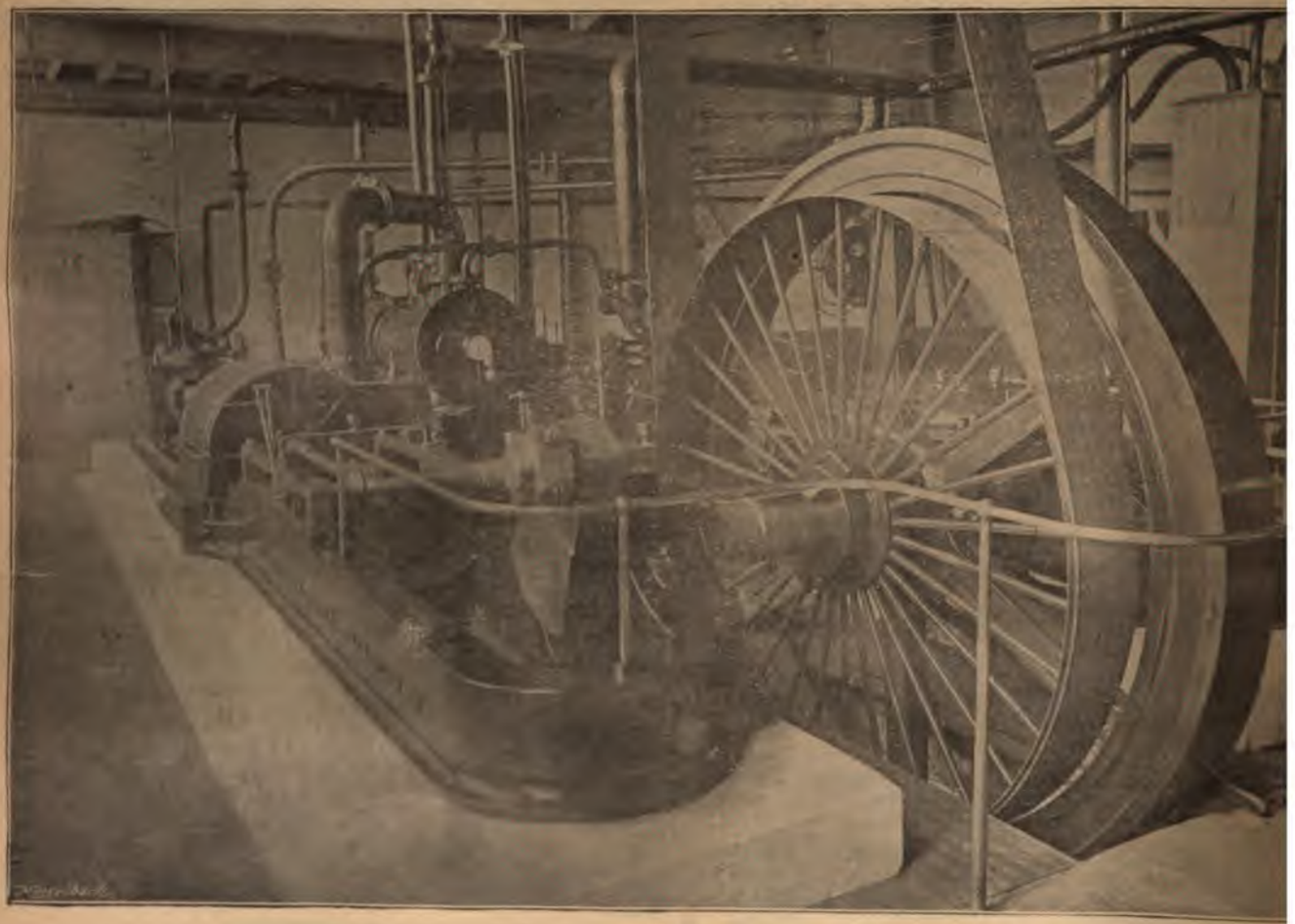

FIG 1.

The boiler is of the Lancashire type, so constructed of mild steel, as to pass Lloyd's rules, at a working pressure of 110 lbs. per square inch, and is fitted with water circulating cross-tubes.

The size of the boiler, and the grate areas are specially proportioned so that a poor quality of coal can be burned.

The donkey pump is of the contractors' "Deane" pattern, mounted on a cast-iron tank supplied with usual ball valve, and water from the main.

The engine is of the horizontal compound side-by-side type, driving the ammonia compressing pumps tandem. The high-pressure cylinder is fitted with automatic cut-off expansion gear, and the low-pressure cylinder with ordinary slide valve.

The surface condenser, which is placed between the engines, is fitted with brass tube plates and tubes with screwed ferrules.

The air-pump and water circulating pump, together with the feed pump, are driven from the crosshead of the low-pressure cylinder by means of bell crank levers.

the machinery when the main engine is not running. It do show the two brine pumps however.

These brine pumps are of the double-acting type, fitted wit valves, lines, and rods, and are fitted with first and second shaft with mortice gearing.

The water pump, which is of a similar design, cannot be seen illustration. This water pump draws from a large dam or re just outside the engine-room, and discharges into the condenser

Fig. 2 shows one end of the ice house, with a view of the c and some of the ice. At this end is placed a circular saw, for c up the blocks as required.

The ice is lifted and removed from one end of the building other by handy rope travelling cranes, with both horizontal and travellers.

The cold rooms are fitted with brine coolers, and are supplied brine from one of the refrigerators. The atmosphere in the roo

perfectly clear and cool and dry; the total capacity of these rooms being about 70,000 cubic feet.

The building is fitted throughout with electric light, and the cold rooms are served by an hydraulic lift.

By the courtesy of Mr. Bookless of the Sheffield Pure Ice Company, we were able recently to inspect the plant we have just described, and in the course of our conversation with him learned that his company are more than satisfied with the plant both as regards the way it was erected and is daily working. Such a statement is perhaps the best testimony it is possible to adduce in support of the success which the Pulsometer Engineering Company justly claim to have achieved. The plant as a whole is well and compactly planned, but is at the same time thoroughly get-at-able as well as being finished in thoroughly first-class style. In the trial already referred to the output was 23 tons of ice as against the 20 tons guaranteed.

Another point which speaks well for the plant is the efficiency attained under adverse conditions. Thus the water to be frozen should in the terms of the contract have a temperature of 68° F, but as a matter of fact the water as actually suppplied averages 85° F., and even gets as high as 90° F., yet the plant is giving easily all the ice the Company wants. There was a striking absence of leakage in the compressors. In fact it was not an easy matter at first to decide whether it was an ammonia or carbon dioxide plant. As a general rule the nose at once settles this point. It was almost impossible to detect any leakage of ammonia round the stuffing boxes and glands of the compressors

The water difficulty is one which the Sheffield Company mean to cope with at once by sinking artesian wells, which they expect to have ready before next summer. As the Pulsometer Engineering Company were in no way responsible for the water supply being so warm it certainly is very creditable that the plant should be daily turning out 15 tons of good transparent ice, as well as thoroughly maintaining the efficiency of the cold storage buildings. We understand that within six months of the signing of the contracts, ice was being produced.

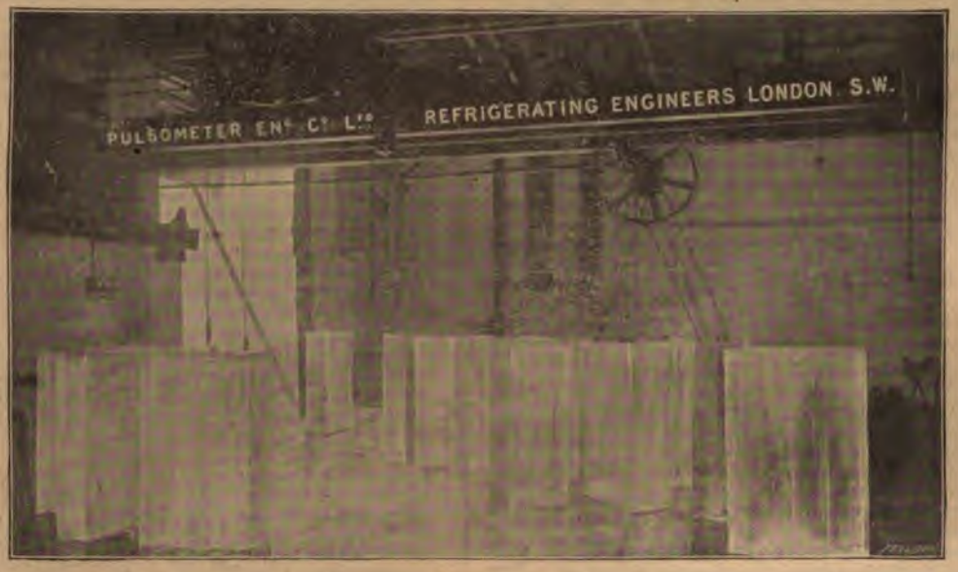

FIG 2.

MORE PETROLEUM SPRINGS.—Advices from Temesvar near Budapest state that petroleum springs have been discovered on the Szredisty property near that town.

CHEMICALS *via* THE CANAL.—The shipments through the Ship Canal have just recently been of noteworthy interest to the chemical trade. Besides the usual weekly arrivals and sailings in connection with the regular Continental services, there have been six arrivals with timber and *wood pulp* from Canada and the Baltic. Over 360 tons of *logwood* have been imported from Belize, 400 tons of ice from Engervik, Norway, 20,000 *horn piths*, 312 tons of *bone ash*, and 180 barrels of copper ore from Pelotas, and a cargo of *resin* from Savannah —all in sailing ships. Steamers arrived from New York, Stettin, and Denmark, and Rouen, with general cargoes, from Huelva, with *iron pyrites*, from St. Valery and Treport with boulder flints, from Cherbourg with French runners and stone, and from Harburg with *waste salt*.

Reports of Companies.

THE GAS LIGHT AND COKE COMPANY, LIMITED.

A decrease of £60,260 is shown in the gross receipts of the Gas Light and Coke Company for the June half-year, the diminution being due wholly to the poor demand for coke, which seems to be produced in excess of the home requirements. As an offset to this the directors have arranged to export it more largely than hitherto. The cost of coal having been materially lower than in 1895, the net revenue is only £48,300. less, although most other items of expenditure have been greater. After paying 12¾ per cent. on the ordinary stock a balance of £108,897. is carried forward, against £256,801. The balance-sheet shows a reduction in the amount of arrears of gas bills due to the company; but a much less welcome feature is the large addition to the value of residual products on hand, there now being £33,500. in coke and £45,000. in tar and ammoniacal liquor. The figures of gas sold for the past half-year, after correction for the extra day (February 29th), when compared with those for the June half-year of 1894, show the very satisfactory increase of 563,569,000 ft., which is equal to an average rate of 3 per cent. per annum for the two years. The constantly increasing use of gas for cooking and heating, and the extension of the system of supply of gas by automatic pre-payment meters, of which 42,333 are now fixed on this company's district, have largely contributed to the improvement in the company's business

The directors have the satisfaction to report that their purchases of coal for the current twelve months have been made at prices slightly lower than those of last year's contracts. In order to provide for the expenditure necessary for an extension of automatic meter supplies and the general increased demand for gas, the directors will apply to the proprietors for authority to create and issue Ordinary "A" stock to the further amount of £150,000.

LEEDS FIRECLAY COMPANY, LIMITED.

The directors, in their report for the year ended June 30th last, state that, after placing the sum of £9,000. to the reserve fund, the divisible profit, including £2,707. brought forward from last year, amounts to £63,213. Deducting interim dividends of 6 per cent. on preference shares, and 5 per cent. on the ordinary shares, there remains a balance of £25,213., less 6 per cent. on preference shares paid July 1st, leaving £17,213. The directors propose a dividend on the ordinary shares for the six months ended June 30th at the rate of 7 per cent. per annum, making, with interim dividend, 6 per cent. for the year, carrying forward £3,213. The directors have to report a satisfactory increase in the company's business as compared with the corresponding period of last year, and that the whole of the works are at present well employed. During the year an additional investment of reserve fund has been made by the purchase of a freehold estate within the city of Leeds at a cost of £5,000. This fund now amounts to £56,000. The mortgage, £8,020., has been paid off since the close of the company's financial year.

Parliamentary Jottings.

THE LOCOMOTIVES ON HIGHWAYS BILL.

In the House of Commons last week this Bill was considered as amended.

Mr. Luttrell moved a new clause requiring these locomotives to carry lights at night, as bicycles did. Mr. T. W. Russell said the Standing Committee on the Bill thought that point could be best regulated by the Local Government Board. Mr. Warner urged that the amendment should be inserted in the Bill. Sir W. H. Hart-Dyke supported the clause as a protection from accidents. The Solicitor-General accepted part of the amendment, which was agreed to.

Mr. Luttrell moved that every light locomotive should also carry a bell or other instrument to give warning of approach. Mr. Chaplin said he would accept it if it was the wish of the House. The clause was added to the bill.

Mr. Luttrell next moved a clause limiting the maximum speed on public highways to 14 miles an hour. Mr. Lough advocated 10 miles an hour. Mr. Chaplin thought the matter should be left to the Local Government Board. The Solicitor-General suggested to add to the clause—"Or any less speed prescribed by the Local Government Board." Mr. Luttrell agreed to accept that addition. The new clause was agreed to, with the suggestion of the Solicitor-General added to it.

Commander Bethell moved an amendment preventing an appeal to the Local Government Board as to regulating the use of locomotives upon highways. After some discussion the amendment was negatived.

Mr. Chaplin moved to re-commit the Bill in respect of new clauses as to weight and penalties. The motion was agreed to

In Committee, Mr. Chaplin moved a clause imposing an extra duty on locomotives exceeding three tons. Mr. Luttrell and Mr. Lough opposed it. The House divided: For the clause, 125; Against, 30; Majority, 95.

The other new clause was agreed to, and the Bill was then reported.

CORRUPT COMMISSIONS IN BUSINESS.

Mr. Hazell asked the Attorney-General whether his attention had been called to the report of the trial of Oetzmann *v.* Long, on the 6th July, in the High Court, before the Lord Chief Justice, in which the case turned upon the payment by the defendants of corrupt commissions to a confidential servant of the plaintiff; whether he had read the Lord Chief Justice's summing up as to these corrupt bargains, in which he stated that if the evil continued to exist as it had existed in the past the Legislature must take steps to put an end to it; whether he was aware that this was at least the third case of the kind within a few months in which the Lord Chief Justice had given judgment in equally emphatic terms, and that this system of commercial bribery or secret commissions was widespread; and whether he would institute an inquiry under the authority of Parliament in order to ascertain the extent and the working of the evil, with a view to remedial legislation.

Sir R. Webster: My attention has been called to the case, and to the language of the Lord Chief Justice. While entirely agreeing with his Lordship's remarks as to the mischief occasioned by the practice of payment of secret commissions, the existing law is, in my opinion, sufficiently strong to prevent, and, if necessary, to punish, any illegal practices in connection therewith. I am not satisfied that any inquiry is necessary, or any legislation desirable.

THE METRIC SYSTEM.

On the motion of Mr. Ritchie a Bill was introduced and read a first time to legalise the use of weights and measures of the metric system.

THE GERMAN PETROLEUM FLASHPOINT STANDARD.

By Mineral Oil.

(*Concluded from p. 68*)

DIRECTIONS for the making and using of the German form of Abel apparatus are published by the Normal-Aichungs-Kommission in pamphlet form, 1883. One sentence from it gives in short the position of the German Government. "There has been criticism on the fact that a lower test than in England had been adopted. But complete safety from explosion requires a flashpoint far above 30°C. (86°F.) The increase in price and the greater difficulty in burning prevented such a standard being adopted *The only question for us was whether oil of 23°C., as in England, or 21°C. should be adopted.*" This 2° was going to increase perceptibly the price of the oil, interfere with the German trade in foreign oils, and, as proved by Dr. Weber's experiments, would have given practically no increased safety. This amounts to a confession, that after what the merchants said the safety of the people was never considered at all. A standard of 100°F Abel was not discussed. A strange commentary on their opinion that standard of 73°F. Abel test would be too expensive for Germany and burdensome for the Americans to make, is the fact that practical the oil supplied to Germany now seems to be over 73° Abel. Che in different parts trying to get oil of 70° for experimental pur could scarcely get even one sample as low as 73°F., yet Germany ruined nor the manufacturers harassed.

Writing to the Imperial and also Berlin City authoritie statistics the author got no figures, but was told by both tha explosions were rare, and that all other accidents were the result of lessness, and therefore the oil was not to blame. One perhaps not to be surprised therefore when we consider his associate Prof. Lunge in seeking information for this inquiry in his circular Swiss cantons carefully excludes them from sending information accidents caused by carelessness, but only such as occurred legitimate use of ordinary petroleum The German Governmen to take statistics for some time of explosions only, and Prof. follows suit, *carefully excluding all information of importance.* one is surprised to find him expressing the opinion that hig petroleum poured on a kindling is as dangerous as low-flash. low-flash petroleum, heated above flashpoint, as it often is, the travels back and the vapour in the can is exploded, generally wit results, just as Prof. Lunge stated; but with high-flashing pet the flame cannot travel back as there is no vapour mixture to e in the can. Yet Prof. Lunge assured the committee that th would travel along the stream of high-flash oil. Servants in Se it appears, in spite of all orders to the contrary, use paraffin kindling fires wherever it is used* There is never a death, al there is often an explosion of the vapours when poured on hot and a light is applied. It causes alarm but seldom harm He a safer standard would give an increased feeling of security an accidents. He does not know that one trusted authority Redwood, has assured us that 90° old open test is quite safe e and that the Home Office and London C.C. officials long ago us that 73° oil only became dangerous at above 100°, and *feeling* of security as far as the bulk of the people is concerned not be increased, although certainly the actual safety could.

It is not surprising that Prof Engler should help Abel, Dew Redwood to uphold governmental infallibility, and thus innocent the S.O.Co. He, a Government adviser, and moreover o accepts work and fees from the petroleum trade, is scarcely do anything else, but we expected something different from th mountains. Dr. Chandler goes quite contrary to the spirit authorities by pouring contempt on the American State gover and their scientific advisers; but although he stultifies himself cannot stultify his own good early work, which will stand the time. On that old work alone has *he* any right to pose as an au

It is rather alarming to find Governments playing into the h a powerful would-be monopoly, but we must remember tha the high-flash advocates of the people's interests (although co could not turn the election of even one M.P., the petroleum m are many. Moreover, whether in England, America or Germa are empowered by a unity of purpose and action, and through world act as one man. If the bulk of the people showed any in their own concern we should see Goverment and Parliament rightabout turn with more alacrity than dignity. In the m governments and parliaments are to be excused, as with them th are always right.

LAGUNAS SYNDICATE (LIMITED).

AN extraordinary general meeting of this company (in liqu was held at Winchester-house. Mr. J. H. Gretton (one liquidators), who presided, stated that, after notifying the shar that, in accordance with section 142 of the Companies Act, th liquidation would be closed, legal proceedings were com against the liquidators, and an application was made to the C an injunction to prevent the closing of the liquidation. No op was made to the application, as there was no desire, except convenience of the shareholders, to bring the liquidation pro to an end The present meeting had been rendered necessary to comply with the Act, which provided that if a liquidation co over one year the shareholders should be called together again accounts of the liquidation had been distributed, and if any shar required further information he should be pleased to give it. the meeting dispersed he should ask them to vote him £220. o balance of £420. at the bank by way of remuneration. The liquidator (Mr. Fleming) had decided not to ask for any pa Mr. Ellis stated that he should vote against any remuneration given to the liquidators until the liquidation was closed. In cussion which followed several shareholders spoke to the same and a resolution in favour of paying the chairman £220. services was negatived by a considerable majority. The cha before putting the resolution to the meeting, remarked that if it not carried he should decline to serve any longer as a liquidator.

Our Book Shelf.

URIC ACID AND ALKALI. Vol III. By Dr. George Lunge. nd edition. 840 p.p. 248 illustrations. London: Gurney and son 1896.

e who will take the trouble to compare this volume with the onding volume of the first edition will find ample corroboration uthor's statement in the preface that this is not merely a "new " but practically a new book altogether, for which the first has but served as a ground-work. That part of the book which o the ammonia soda process has undergone a striking transforma- id the description now given of the process which has within the r years so entirely changed the aspect of the alkali trade, is as full and complete as could reasonably be expected. We hat a new chapter is devoted to the preparation of carbonic acid l the technical treatment of the entire subject is altogether much xhaustive than in the earlier edition. In connection with the on the costs of this process (and the same remark applies out the book), we would suggest that for an English edition it e better to adopt English terms throughout. This would avoid ture of tons, kilos, shillings, francs and marks, which renders rate and intelligent following of the calculations a slower opera- n it need be. It may be urged that in cases where foreign s and values are introduced it is as well to have the foreign exact calculations, but we still contend that for an English he chief *desideratum* is that the calculations shall be in the sily intelligible form.

the manufacture of alkali by the sundry processes enumerated cribed in Chapters X., XI., XII., XIII., and XIV. we are not ich concerned, as none of them seem able at the present day to the side of the ammonia soda process; but we think Dr. as done quite the right thing in giving some of them a pro- record in his book, as more than one would appear to contain the elements of success, and more may be heard of them r It may, for instance, be news to some of our readers to hat at the present day caustic soda is being made in this from nitrate of soda and oxide of iron in the manner described ter XIV.

portion of the book relating to the manufacture of chlorine has ought up to date by a treatment as vigorous as that extended to nonia soda process; but when Dr. Lunge, on p. 341, speaks of ibility of making a ton of 35% bleach with considerably less cwts of salt, we think he has given himself a very unneces- rgin, especially as he mentions a very much lower figure else- The chapters on the Deacon process differ from those devoted Veldon in that whereas the Deacon has many great improve- nd radical developments to chronicle since the first edition of k was published, the Weldon can only place on record a l and persistent perfecting of points of detail which, however, ggregate, have been of immense importance

omewhat a pity that this volume is published just too soon to e the success of the latest large installation for making chlorate We allude to that of Messrs. Bowman, Thompson, and Co., wich, who, we understand, employ a modification of a process patented by Herman and Hargreaves, but which is perhaps lly described in Gmelin than in the blue book of the patent At all events, we understand the process employed is entirely al, and the manufacturers have captured a very large proportion ade in this article. Some of the most interesting pages of the e devoted to a consideration of the nitric acid processes for chorine and the electrolysis of common salt. With respect to ter it is somewhat difficult to gauge the author's attitude, and ht have looked for a more pronounced opinion, though perhaps rly stages of any process it is on the whole wise to be content eping an open mind, and to suspend judgment until something lity of development is attained. We cannot help thinking that xamination to which Dr. Lunge has subjected the various nitric cesses he has somewhat failed to grasp the fact that the success or ess of any individual process depends not so much upon the on of chlorine that can be obtained from the hydrochloric acid peration, as upon the nature and quantity of the residual pro- nd the perfection of the methods adopted for their after treat- d recovery. Very little light is thrown upon the subject by the reagents to have, as it were, one round with each other. iculties and disappointments have not begun till this stage is d the point of their commencement is just about coincident with which Dr. Lunge's experiments appear to have terminated.

hapters on electrolysis are exceedingly valuable; we think the cal introduction a distinct advantage, and the text tells us prac- ll that there is to be known, up to the present, about the pro- of bleach and caustic by electrolysis. We are bound to confess a little disappointment that the costs and calculations seem to be chiefly based upon things which should be, rather than things which are, but perhaps at this stage of the history of electrolysis such a drawback is more or less inevitable.

The fact that the book is virtually a new one will perhaps account for a few errors that we have noted during its perusal. On page 202 we read of Tessié du Moray, on page 204 we find $BaSO_8$, on page 569 G. and E Davis should be G. E & A R, and on page 277, the method of testing manganese ore would seem to require the employment of a semi-normal solution, instead of a deci-normal as is suggested.

On the whole, we think the work a most complete and valuable one, and that no chemist, manager, or other individual interested in chemical technology can afford to handicap himself by being without it.

Trade Notes.

REGULATION OF NITRATE SHIPMENTS.—The Permanent Nitrate Committee has received an official telegram from Iquique stating that the directory of the Nitrate Combination has fixed the quantity of nitrate to be exported to all parts in the twelve months from the 1st April, 1896, to the 31st March, 1897, at 20,300,000 Spanish quintals Under the Combination agreement a margin of 2½ per cent. on the declared quantity, or 507,500 quintals, is tolerated, and it is probable that this additional quantity will be exported.

ILLEGAL STORAGE OF EXPLOSIVES.—At the Isle of Wight Petty Sessions, at Newport, on Monday, Richard Bulmore, agent for Messrs. Westwood and Co., railway contractors for the new line to Ventnor, was fined £35. under the Explosives Act, for storing 500 lbs. of gelignite without having a licence. The Bench made no order for the forfeiture of the material, valued at £50., as it was stated that arrangements were nearly complete for meeting the requirements of the local authority for storage.

EXPLOSION AT A PAPER MILL.—On Tuesday the Springfield Paper Mills at Bolton were partly wrecked by the explosion of a couple of boilers in what is called the Revolver-house, and six of the workpeople were more or less injured. A very large number of hands are employed at the mills, and it is surprising that no lives were lost. In the Revolver-house, where the explosion took place, there are five boilers used for the purpose of reducing waste material to pulp. At the time of the explosion a number of people were at work in the room overhead. When the boilers burst, the upper part of the building was carried into the air along with the wrecked plates, and dropped into the yard. As soon as possible the injured people were conveyed to the Infirmary.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols have been active again, and are now a little quieter at 3s. 9d. for 90's and 2s. 9d. for 50/90's. Forward 90's are quoted 3s. 7½d. September-December, and 3s. 4½d. January-June. For 50'90's 2s. 8d and 2s. 6d. over corresponding periods. Crude carbolic remains steady at 2s. 2d. for 60%, while 40% crystals are a shade lower at 7d. Crude naphtha scarcely responds to benzol as might be expected, the price being quoted as 10½d. to 1s. Solvent is steady at 1s. 5d. Pitch firm at 32s., f.o.b. East Coast.

Sulphate of ammonia is, if anything, weaker, chiefly owing to the competition of the Scotch market. Prices are: London outside makes £7. 17s 6d, Liverpool £7. 18s. 9d., Hull £7. 16s. 3d., and Leith £7. 13s 9d. to £7. 15s., all prompt.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade values remain fairly steady all round, and there are no changes of importance to report. Bleaching powder is moving more readily, and stands at £6. 15s., f.o.r. makers' works, and for export, £6. 10s to £7., according to market. Alkali, 58%, firm, at £3. 7s. 6d., bags, f.o.r. Caustic soda is moving off steadily, and shows no tendency to any further decline except upon the higher strengths. Current quotations are as follows: f.o.b., Liverpool, 77%, £9. 7s. 6d; 74%, £8. 7s. 6d.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. net per ton, 10-ton lots. Soda crystal quiet, at 35s. per ton, bags, f.o.r. Salt cake steady, at 22s. 6d. in bulk, f.o.r., with better inquiry for export. Chlorates do not show any sign of improvement in the meantime, and stand nominally at 4½d. for potash, and 5¼d. per lb. for soda. Recovered sulphur has further advanced to £4 5s., f.o.r., and is in short supply. Sulphate of copper remains firm in price, at £16. 15s. f.o.b. White powdered arsenic continues scarce, and prices are £22. 10s. to £23. per ton. Potash, caustic and carbonate,

are in good request, and selling freely at higher prices. Yellow prussiate of potash declined to 6½d. net per lb. Sulphocyanides also have a lower tendency. Cyanide, 95%, 1s. 1d. per lb In acetates of lime there is no improvement, and business has been done in brown at £4. to £4. 2s. 6d., c i.f United Kingdom ports; grey, £7. 15s. to £8, c.i.f. Acetate of soda steady, at £14. c.i.f. Acetic acid, 40%, 8s. 6d. to 9s., according to locality. Other acetates quiet. Muriate of ammonia rather lower, at £21. 10s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

There is no improvement to note in the general market, although all the works have now resumed production after the stoppage. Chlorate of potash and sulphate of copper are easier, but as yet stand at the same prices as given a week ago. The only exception to the general tendency is sulphur, which is firmer and slightly higher in prices. Sulphate of ammonia has gone back again, and the bottom price of £7. 12s. 6d. Leith was seriously talked of, although it is not quite certain that any lot was actually let go again at that. To-day the value can only be vaguely stated as between £7. 13s. 9d. and £7. 15s Nothing at all for forward.

There is an important meeting of the Mineral Oil Association on for to-morrow (Wednesday), the business being the fixing of burning oil for the new season. Last season's prices were 6¾d. and 7d., according to quality, delivery at Glasgow and other big centres in Scotland. A halfpenny had to come off that in May last, and the question is whether another fraction must now be dropped. Sales to England are always a little lower.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 1¼d.; sulphate of ammonia, £7. 13s. 9d. to £7. 15s. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 10s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2⅞d. to 2¾d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 8s. 9d. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 2,988 bags and 1,772 baskets cane unrefined.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron, quiet: Scotch warrants closed at 45s. 9d.; Middlesbrough 36s. 8d. cash, and hematite 46s. 7½d. Copper, firm: Chili bars, G. O. B.'s and G. M. B's., closed at £49. to £49. 5s. cash, and £48. 15s. to £49. three months. Tin, quiet: Straits closed at £60. to £60. 10s. cash, and £60. 11s. 3d. to £61. 1s. 3d. three months; Australian, £60. 17s. 6d. Lead, quiet. Spanish, £10. 18s. 9d; English, £11. 2s 6d. Silesian spelter, ordinary, £17. 10s. Nickel, 1s. 2½d. Antimony, £29. 10s. Quicksilver: First hands, £6. 7s. 6d.; second hands, £6. 7s. *Copper shares*, steady: Cape, 2⅞ to 2⅝; Copiapo, 2 7/16 to 2⅜; Libiola, 2¾ to 3; Mason and Barry, 3 to 3¼; Rio Tinto, 22⅛ to 22⅛; Tharsis, 5⅛ to 5¾.

GLASGOW, WEDNESDAY.—Market dull, with small business. Scotch done at 45s. 9½d., 45s. 10d., and 45s. 9½d. cash, also at 45s. 11½d. and 45s. 11d. one month; closing with buyers at 45s. 9d. cash, sellers ask 45s. 9½d. Cleveland done at 36s. 10d. one month; closing with buyers at 36s. 8d. cash, sellers ask 36s. 8½d. Cumberland hematite done at 46s. 8d. cash; closing with buyers at 46s. 7½d. cash, sellers ask 46s. 8d. Middlesbrough hematite closes with buyers at 44s. 2½d. cash, sellers ask 44s. 3½d.

REPORT ON MANURE MATERIAL.

The market continues very quiet all round, but prices last reported are about maintained. There continues to be inquiry for high grade mineral phosphates for the Baltic and the Continent, but no further important business is so far reported. The quotations for all descriptions of rock are unchanged. In the United Kingdom, mineral phosphates do not seem to be attracting any interest at all. There is no further business reported in River Plate bones, the price s cargoes for shipment being an advance on last price paid, a buyers' idea of value. Bombay bone meal offers at £3 15s. for shipment, and this price would be accepted for parcels near Shippers of crushed Kurrachee bones having decided to market, would now accept £3. 12s. 6d per ton for autumn Nitrate of soda remains quiet at 8s. per cwt. for fine, and 7 per cwt. for ordinary quality, on spot. Cargoes arrived at po or due are a shade easier, and 7s. 10½d per cwt. may be c the outside value, ordinary quality.

LIVERPOOL OIL AND COLOUR MARK

WEDN

OILS.—There is a little doing in palm oil in Lagos at £ but otherwise things are very quiet. Olive is firm, and in request at full prices. Linseed is steady, though quiet: makes in export casks are still quoted 17s. 3d. to 19s. according to quality. Castor oil is firm: Good seconds Ca particular stands steady at 3⅛d. to 3¼d., ex store, all qu having been cleared. First pressure French a little easier to 2⅝d. per lb. There is no alteration in the price of ta the inquiry is decidedly feeble. Resin keeps steady, values of all grades are steadily maintained. Spirits of turpe wavering between 19s. 3d. and 19s. 6d. per cwt., but holder posed to be steadier. Cottonseed is firm, and well held for 16s. Liverpool refined; and American, 16s. to 16s. 6d. per quality and quantity. Petroleum is steady, with a fai market. American stands at 6¼d. to 7½d., and Russian 5½d. per gallon.

COLOURS.—Prices are steady, and practically without Ochres: Oxfordshire, common, £10., medium, £12., be Derbyshire, common, 40s.; medium, 50s., best, 60s.; Wel 90s., seconds, 50s., and common, 18s.; Irish, Devonshire 45s.; French, J.C., 65s. Umber: 40s. to 45s. White le Red lead unchanged. Venetian red, £6. to £10. Cob pared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to

TYNE CHEMICAL REPORT.

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The chemical market is perhaps a trifle more active especially showing a strong upward tendency, and large sales concluded at enhanced prices. South Durham salt continue at 9s. 6d. per ton, f.o.b., for common salt.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10 nett; caustic soda, 77%, £9. 5s. per ton, nett; do., 70%, per ton, nett; recovered sulphur, 2 cwt. bags, £4. 5s. per soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3 ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £ per ton, nett; white alkali, 48%, £4. per ton, nett; £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hypos soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per to do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3 per ton, nett; soda crystals, casks, £2. 2s. 6d. gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett chlorate of potash, 5d. per lb., less 6%; pearl h £3. per ton, nett; pure white sulphate of alumina, £3 per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride o £6. 15s.; sulphide of barium crystals, £5. 15s. per t carbonate of alumina, £30. per ton, nett; aluminate of so per ton, nett.

The coal market continues steady, and best Northumbrian in demand, at 8s. 6d. per ton, f.o.b. Tyne, whilst steam smal obtained at 3s. 6d. per ton.

HULL PAINT, OIL, AND COLOUR REPO

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OILS.—The market is without animation, leaving linseed lower, having lost the little it had recovered; cotton oil flat. Much correspondence appears in the local papers in d margarine by persons probably holding a brief from Germa facturers, who appear to ignore the point that the German Gov have just lately "clapped" a prohibitory duty upon cotton o a pity that English manufacturers with capital appear so to help themselves with this trade. "The harvest truly but ('English') labourers are few." The import of linseed the week has been 18,062 quarters, viz., from East Indies quarters, St. Petersburg 6,890 quarters, and Odessa 706 q Linseed oil is again lower, especially in the forward p

Spot closes flat at 15s., naked, and August offering at 15s. 1½d, whilst for September - December down to 15s. 3d. has been accepted. Boiled and refined from £1. to £2. per ton extra. Export for the week has been 1,900 cwts. The import of cottonseed has been 130 tons from Smyrna. Refined cotton oil is flat at 14s. per cwt., naked, spot, and same nearest value for August-September. For November-April there are sellers at 14s. 3d.; crude offers on spot at about 12s. 7½d., naked—casks £1. and ordinary barrels £1. 10s. per ton extra. Turpentine 20s. per cwt. Olive oil unchanged. Castor oil 2⅝d. to 2⅞d. per lb. for first pressure. Cod oils £17. to £20. per ton. Herring oil £13. Brown Yorkshire grease £8. per ton, f.o.b. Locomotive grease £10. per ton.

CAKES are a quiet market; mills remain uncertain for running. Linseed cakes £4. 5s. to £5. 7s. 6d. per ton, cottonseed cakes £3. 12s. 6d. to £3. 17s. 6d., Black Sea rape cakes for manure purposes £2. 2s. 6d.

PAINTS.—Prices are unchanged, and painters' materials find still a good all round demand.

New Companies.

Bostock and Company, Limited.—CAPITAL £150,000, in £10. shares, of which 9,000 are preference, and 6,000 ordinary shares. This company has been formed to trade as sugar, saccharine, and charcoal manufacturers, sugar refiners, etc. The subscribers to the memorandum of association are:—E. T. Hargraves, 18, St. Thomas-street, S.E., warehouseman; T. W. Hargraves, 18, St. Thomas-street, warehouseman; A. S. Chetwood, Sun-street, Waltham Abbey, Essex, clerk; C. J. Saunders, 52, Barset-road, Nunhead, warehouseman; C. S. King, 98, Albert-road, Peckham, S.E., clerk; F. G. S. Cooke, 86, Devonshire-road, Forest-hill, S.E, cashier; F. Mann, 23, Matham-grove, E. Dulwich, hop salesman.

Standard Oil Company of Galicia, Limited.—CAPITAL £100,000., in £10. shares. Under this title a prospecting company was formed in Feb. last (*C.T.J.* 456, p. 122). The present company has been formed to enter into an agreement with the Petroleum Proprietary, Limited, to further develop the oil bearing grounds, and prepare the product for the market. The subscribers to the memorandum of association are:—A. C. C. de Plenzy, 20, Park-hill, Ealing, surgeon; A. J. Lut, 14, Queen Victoria-street, E.C., merchant; J. P. White, 14, St. Mary Axe, E.C., tea estate owner; H. McAuliffe, 23, Billiter-buildings, E.C., accountant; P. E. Beachcroft, 10, Upper Hamilton-terrace, N.W., director; W. C. Chute, 75, Cornhill, E.C., merchant; G. B. Bluett, 75, Cornhill, E.C., clerk.

Calcium Carbide Company, Limited.—CAPITAL £5,000, in £100. shares. This company has been formed to adopt an agreement between J. C. Bayley and F. B. Courtenay, to manufacture calcium carbide, acetylene gas, and generating apparatus connected therewith.

Chandler's Reward Gold Mines, Limited.—CAPITAL £150,000., in shares of 5s. each This company has been formed to take over certain mining rights connected with the mining of manganese lead, copper, coal, precious metals, asbestos, sodium nitrate, phosphates, etc. The subscribers to the memorandum of association are:—E. Heathfield, 2, Vicarage-road, Teddington, merchant; F. J. Powett, St. Andrew's, Albert-road, Croydon, accountant; L. Cullock, Holm Cottage, Addiscombe, accountant; W. Muchuchlan, 1, Queen Victoria-street, E.C., engineer; C. R. Brown, 40, Sun-street, E.C., printer; J. Chum, The Knoll, King's-road, Clapham, S.W., accountant; T. W. Presto, Salisbury Villa, Frobisher-road, Hornsey, N., accountant.

British Moss Litter Company, Limited.—CAPITAL £150,000., in £1. shares. This company has been formed to carry on the business of manufacturers of moss litter, peat products, manures and feeding cakes, etc. The subscribers to the memorandum of association are:—C. Dove, Hodroyd Hall, near Barnsley, J.P.; F. Livingstone, 54, Billiter-buildings, E.C., merchant; G. N Somally, 38, Fenchurch-street, E.C., broker; E. Van de Griendt, 62, Mark-lane, E.C, merchant; W. A. Owston, jun., 62, Mark-lane, E.C, manager; J. W. Rowlands, Lickey Grange, Worcester, gentleman; W. Smith, jun, Goole Grange, Goole, manufacturer.

Langloan Iron and Chemical Company, Limited—CAPITAL £125,000. in shares of £1. each. This company has been formed to trade as ironmasters, colliery proprietors, and blast furnace bye-products manufacturers. The subscribers to the memorandum of association are:—John Addie, New Park, Addington, Lanarkshire, ironmaster; James Addie, 144, St. Vincent-street, Glasgow, ironmaster; W. H. Kidston, 81, Great Clyde-street, Glasgow, iron merchant; R. McDonald, 144, St. Vincent-street, Glasgow, cashier; J. Reid, 67, St. Enoch-square, Glasgow, iron merchant; J. W. Sutherland, 144, St. Vincent-street, Glasgow, bookkeeper; G. Thompson, 144, St. Vincent-street, Glasgow, coal salesman.

Gazette Notices.

PARTNERSHIP DISSOLVED.

T. BEVAN. R. BEVAN, E. H. BEVAN. and W. BEVAN, cement manufacturers, Northfleet, and Leadenhall-street, E.C., under the style of Knight, Bevan and Sturge, as far as regards T. Bevan.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
Week ending July 25th.

Acetate of Lime—
U. States, 1,231 bls. L. & I. D. Jt. Co.

Acetic Acid—
Holland, 160 pks. Little & Johnston
France, 1 J. Harrison
Holland, 70 J. Owen
" 157 A. & M. Zimmermann
" 50 R. W. Greeff & Co.

Acetone—
Germany, 20 drs. Thames S. Tug & L. Co.

Alkali—
Holland, 20 c. J. Barber & Co.
France, 110 J. Harrison
Belgium, 110 T. H. Lee

Alum—
Germany, 10 cks. T. H. Lee

Anhydrous Ammonia—
Belgium, 13 pks. J. D. Hewett & Co.

Antimony Ore—
A. Turkey, 44 t. James & Shakespeare

Asbestos—
Italy, £370 J. Barber & Co.
Germany, 35 T. H. Lee
France, 85 Hernu, Peron & Co.

Barium Chlorate—
Germany, 44 cks. S. Devon Wf. Co.
Holland, 24 "

Barytes—
Belgium, 59 brls. O'Hara & Hoar
Holland, 110 cks. W. Harrison & Co.
Belgium, 18 J. L. Lyon & Co.
Germany, 53 W. Harrison & Co.
Holland, 6 H. Keller & Co.
Germany, 20 Steinhoff, Sons & Co.
Belgium, 34 100 bgs. W. Harrison & Co.
" 56 A. Zumbeck & Co.
Holland, 88 cks. Taylor Brs.

Bleaching Powder—
Holland, 17 cks. J. M. Steel & Co.

Bromide of Iron—
Germany, 5 cks. A. & M. Zimmermann

Camphor—
Hong Kong, 40 cs. R. Warner & Co.
" 5 R. Thompson & Co.
Japan, 75 tubes Brown & Elmslie

Caoutchouc—
Zanzibar, 112 c. L. & I. D. Jt. Co.
U. States, 10 Major & Field
" 42 Stiebel Brs.
Rangoon, 253 L. & J. D. Jt. Co.
U. S. Col., 60 "
" 92 Stiebel Brs.
Penang, 198 E. Boustead & Co.
Singapore, 52 Prop. Bull Wf.
Penang, 78 "
U. States, 50 "
E. Indies, 53 Ralli Brs.
Rep. Col., 46 Major & Field
Holland, £80 T. H. Lee
U. States, 32 Williams, Torrey & Co.
Madagascar, 36 L. & I. D. Jt. Co.

Carbolic Acid—
Holland, 26 cks. J. Owen
Germany, 50 pks. J. C. Back
" 88 Blagden, Waugh & Co.

Castor Oil—
Italy, 10 cs. May, Roberts & Co
" 50 C. Windschuegl & Co.
Belgium, 114 brls. W. & T. Wills
E. Indies, 87 cks. Ross & Deering
France, 10 brls. Beresford & Co.
E. Indies, 50 cs. W. Balchin

Caustic Potash—
France, 10 drs 250 c. W. E. Cole
Germany, 60 J. M. Steel & Co.

Chemicals *(otherwise undes.)*—
Germany, £562 A. & M. Zimmermann
Holland, 10 Phillipps & Graves
Sweden, 175 R. Greening
U. States, 1,061 C. Loch
" 584 E. E. Bailes
" 172 H. Wigmore
Germany, 80 Phillipps & Graves
Holland, 12 A. & M. Zimmermann
Germany, 20 Petri Brs.
Holland, 17 H. Lorenz
" 107 c. J. Owen
" 227 T. H. Lee
" 20 A. C. Lloyd
Germany, 5 H. Lambert
Holland, 22 R. W Greeff & Co.
Belgium, 5 Société John Cockerill
Germany, 4 L. & I. D. Jt Co.
" 390 T. H. Lee

Chromium Fluoride—
Holland, 13 cs. R. W. Greeff & Co.

Citrate of Lime—
Italy, 70 cks. Thames S. T. & L. Co.

Cream of Tartar—
Spain, 37 cks. B. & F. Wf. Co.
" 5 W. C. Bacon & Co.
France, 5 W. V. Robinson & Co.
" 5 M. Ashby. Ld.
" 22 W. C. Bacon & Co.
" 4 B. & F. Wf. Co.
" 30 Finlay & Co.
Spain, 10 E. & T. Pink
Brindisi, 12 C. Christopherson

Dyestuffs—
Argols
Italy, 1,914 bgs. B. Jacob & Sons
" 137 Thames S. Tug & L. Co., Ld.
Cochineal
Canaries, 5 bgs. W. M. Smith & Sons
Madeira, 5 J. Knill & Co.
Cutch
Ceylon 50 bxs Cayzer, Irvine & Co.
Divi Divi
E. Indies, 53 bgs. Walker, Munsie & Co.
Extracts
France, 30 cks. Union L. Co.
" 560 Boutcher, Mortimore & Co.
Germany, 300 pks. J. Knill & Co.
France, 305 L. J. Levinstein
Denmark, 1 Sorensen & Co.
Fustic
B. W. I., 15 t. Benckendorff, Berger & Co.

Gambier
Singap're, 2,700 bls. A. B. Curtis & Co.
Hong Kong, 102 bls. C. S. Cox & Co

Indigo
E. Indies, 25 chts. Ross & Deering
" 21 F. Claydon & Co
" 9 Elkan & Co
" 6 F. W. Heilgers
Germany, 3 Schenker & Co.
E. Indies, 40 Wallace Brs.
" 4 Croysdale & Co.
" 99 L. & I. D. Jt. Co.

Logwood
B. W. I., 55 t. S. Dobree & Sons

Madder
E. Indies, 3 cks. L. & I. D. Jt. Co.

Myrabolams
E. Indies, 1,000 pkts. Montgomerie & Co.
" 3,600 P. & O. Co.
" 650 bgs. Darling Brs.
" 593 Baxter & Hoare
" 1,205 H. K. Daniels
" 1,365 L. & I. D. Jt. Co
" 1,193 J. Graves
" 1,365 Beresford & Co.
Ceylon, 1,365 Nich.'s Wks. Ld.

Shumac
Italy, 2,315 bgs. J. Kitchin, Ld.
" 300 Beresford & Co.
" 150 Vokins & Co.
" 1,000 Harris Brs.
" 150 W. Roberts
" 200 J. E. Scott
" 200 H. Johnson & Sons
" 70 R. Waters

Tanners' Bark
Adelaide, 204 t. L. & I. D. Jt. Co.
Holland, 9 T. H. Lee
Germany, 25 Leach & Co.
Natal, 74 A. & W. Nesbitt

Turmeric
E. Indies, 302 bgs. Lucas & Spencer's Wf., Ld.

Valonia
Brindisi, 1 t. C. Leary & Co.
A. Turkey, 181 A. & W. Nesbitt
" 10 A. J. Humphery
" 50 Hicks, Nash & Co.

Farina—
Germany, 50 bgs. J. Knill & Co.

Glucose—
U. States, 50 pks 300 c. L. & I. D. Jt Co.
France, 200 200 Barrett, Tagant & Co.
U. States, 252 252 Fellows, Morton & Co.
Germany, 60 48 M. D. Co.
Holland. 120 120 J. Barber & Co
Germany, 25 203 R. G. Hall & Co.
" 25 203 Deering & Robottom
U. States, 750 750 L. Norman & Co.
France, 200 200 W. E. Cole
U. States, 43 229 E. & T. Pink
" 120 689 Ohlenschlager Brs.
" 50 300 Union Ltge Co.
" 50 287 Robinson, Sons & Co.
" 125 750 J. T. Lipton
" 500 1,625 T. M. Duche & Sons
" 115 638 L. Sutro & Co.

Glue—
——, £889 ——

Lamp Black—
Holland, 20 cks. G. Rahn & Co.

Lead Acetate—
Germany, 32 cks. F. Boehm

Lithopone—
Holland, 20 cs. Taylor Brs. & Co.

Manganese Ore—
Germany, 1 t. J. Barber & Co.

Manure—
Wellington, 26 t., F. J. Cornwell Son, & Co.
E. Indies, 300 Fox, Roy, & Co.

Methyl Alcohol—
Belgium, 5 dms. J. Harrison
" 5 F. Alexander
Germany, 5 Stein Brs

Mica—
E. Indies, £821 J. Mitchell
" 403 W. M. Smith & Sons
U. States, 390 L. & I. D. Jt. Co.
Ceylon, 410 E. Davis & Co.

Molasses—
W. Indies 53 cks. 602 c. Perkins & Homer

Naphthaline—
Germany, 25 cks. Flemings Oil & Chemical Co.

Ochre—
France, 4 brls. P. & O. S. N. Co.
" 4 cks. L. & I. D. Jt. Co.
Holland, 22 pks. 1 cs. Phillipps & Graves

Paint—
Germany, 1 cs. T. H. Lee

Phosphate Rock—
Belgium, 10 t. H. & E. Albert
Spain, 575 Lawes Chemi. Wks Co
" 575 Odams Manure & Chemi. Co.

Pitch—
N. Russia, 550 brls. W. F. Malcolm & Co.
France, 42 Poth Hille & Co.
Sweden, 100 Sievekeing, Podmore, & Co.

Plumbago—
Germany, 3 cks. T. H. Lee
" 36 B. Gallaway
Ceylon, 112 G. R. Haller
" 376 J. Threlder, Son, & Co

Potash—
Belgium, 22 cs. Société J. Cockerill

Potassium Bicarbonate—
Germany, 10 kgs. R. W. Greeff & Co.

Potassium Carbonate—
France, 80 c. J. A. Reid

Potassium Cyanide—
Holland, 5 cs. J. Barber & Co

Potassium Oxalate—
Holland, 20 cks. R. W. Greeff & Co.

Potassium Oxymuriate—
Sweden, 20 kgs. G. Boor & Co

Pyrites—
Spain, 350 t. Union L. Co., Ltd.
" 1,353 Anderson, Anderson, & Co.
" 1,975 C. Tennant, Sons, & Co.

Rosin—
U. States, 6,300 brls. Moore & Hole
" 500 C. Tennant, Sons, & Co.

Saltpetre—
Germany, 10 cks. Petri Brs.
E. Indies, 1,596 bgs. Ralli Brs.
" 1,595 H. Grey, junr.
Germany, 25 cks. L. & I. D. Jt. Co.
" 232 P. Hecker & Co.
E. Indies, 874 bgs. Perkins & Homer

Soda—
France, 110c. Prop. Hay's Wf.
Belgium 501 F. Claydon & Co.
Holland, 80 R. W. Greeff & Co.

Sodium—
Holland, 15 cks. R. W. Greeff & Co.

Sodium Chloride—
Germany, 10 cks W. T. Mills

Sodium Hyposulphite—
Holland, 200 kgs. Petri Brs.

Sodium Phosphate—
Holland, 18 cks. Kirkpatrick & Co.

Starch—
Belgium, 130 cs. Leach & Co.
U. States, 145 brls. Beck & Pollitzer
Holland, 960 cs. Vokins & Co
" 65 Phillipps & Graves
Belgium, 370 T. H. Lee
" 140 R. Lehmann
Germany, 730 Horne & Co.
Holland, 112 G. Rahn & Co.
Belgium, 42 Sawer, Sons, & Co.
" 40 Taylor Brs.
U. States, 100 bgs. J. Barber & Co.
" 100 R. G. Hall & Co
Holland, 2,100 cs. Little & Johnston
" 42 T. H. Lee
Belgium, 48 F. Claydon & Co.
France, 100 B. & F. Wf Co
U States, 400 100 bgs. L. Sutro & Co.
" 200 J. Anderson & Co.
" 800 T. M. Duche & Sons
Holland, 20 J. Barber & Co.

Stearine—
France, 125 bgs. H. Hill & Sons
Belgium, 63 "
France, 160 Walbaum & Tosetti
Holland, 26 G. Johnson & Son
Turkey, 469 H. Hehl

Sulphur—
Italy, 43 t. Saundy & Sons
" 20 F. C. Devon & Co.
" 5 F. Smith
" 30 A. Zumbeck & Co.
" 500 Brandram Brs. & Co.
" 10 J. Kitchin, Ltd.
" 50 C. Tennant, Sons, & Co.
" 22 G. Boor & Co.

Sulphuric Acid—
Holland, 10 pks J. Owen

Talc—
France, 70 pks. G. G. Blackwell, Sons, & Co.

Tar—
N. Russia, 2,300 brls. W. F. Malcolm & Co.

Tartaric Acid—
Holland 23 pks. F. C. Devon & Co.
" 32 B. & F. Wf. Co
Brindisi, 48 "

Ultramarine—
Holland, 7 pks. W. Harrison & Co.
" 12 cks. Haeffner, Hilpert, & Co.
" 20 Hernu, Peron, & Co.
" 9 cs. G. Rahn & Co.
Germany, 20 30 pks. Steinhoff, Sons, & Co.
Belgium, 4 W. Harrison & Co.
Germany, 48 cks. T. Hamilton

Varnish—
France, 2 pks. Flageollet & Co.

Verdigris—
France, 3 cks B. & F. Wf. Co

Waste Salt—
Germany, 250 bgs. Ekman Pulp & Paper Co.

White Lead—
Holland, 22 cks. Burrell & Co.
Germany, 20 Randall Bros.
Holland, 20 E. J. Diggins
Belgium, 20 Burrell & Co
Germany, 65 F. G. Clifford
" 22 H. B. Alder & Co.

Wood Pulp—
Belgium, 1,784 pks. E. J. & W. Goldsmith
Holland, 81 Henderson, Craig, & Co.
Sweden, 800 W. E. Bott & Co.
Norway, 300 "
" 400 W. G. Taylor & Co
Sweden, 320 "
" 2,672 Henderson, Craig, & Co
Norway, 294 J. Sharp
Holland, 555 Phillipps & Graves
Sweden, 10,169 Moreton Cox Brs.

Zinc Oxide—
Holland, 50 cks. J. Matton
Germany, 100 W. Balchin
Holland, 1 Phillipps & Graves
" 26 50 brls. M. Ashby, Ltd.
Germany, 10 R. W. Greeff & Co.

LIVERPOOL.

Week ending July 23rd.

Acetic Acid—
Hamburg, 15 cs.
Rotterdam, 20 balloons

Albumen—
Marseilles, 30 cs.

Asbestos—
New York, 76 bgs.

Barytes—
Antwerp, 31 cks.

Benzoline—
Philadelphia, 5,000 brls.

Bone Ash—
Zarate, 430 bgs. J. Nelson & Sons, Ld.

Bone Meal—
Rangoon, 500 bgs.

Borate of Lime—
Iquique, 480 sks.
Antofagasta, 7,230 bgs. 2,600
" 274 Widenmann Broicher
New York, 4,178 Balfour Williamson

Camphor—
Hamburg, 1 cs.

Castor Oil—
Calcutta, 601 cs. Ralli Brs.

Chemicals (*otherwise undescribed*)
Antwerp, 1 cs.

Colours—
Hamburg, 40 cks. 15 cs.
Rotterdam, 5 tubes

Cottonseed Oil—
New York, 173 brls.

Cream of Tartar—
Marseilles, 2 brls.

Dyestuffs—
Cutch
Rangoon, 439 bxs.
Hamburg, 200 cs.
Singapore, 536
Fustic
Tampico, 3,678 ps. D. M
" 922 Grunin
Gambier
Singapore, 552 bls 296 bgs.
" 4,128
Madder
Marseilles, 7 brls.
" 3 cks.
Shumac
Marseilles, 100 bls.
Palermo, 730 bgs.
Valonia
Smyrna, 126 t. 160 bgs.
" 182 G. Essayra
" 100

Farina—
Fiume, 100 bgs.
Stettin, 100

Gelatine—
Rouen, 4 cks.

Glucose—
Baltimore, 53 brls.
Liverpool 200
New York, 200

Glue—
Hamburg, 40 bgs.
Rouen, 6 cks.
Naples, 8 bls.
Rotterdam 30

Lime—
Hamburg, 1 cs.

Limestone—
Antwerp, 4 cs.
Hamburg, 110 dms.

Litharge—
Rotterdam, 8 cks.

Nitrate—
Iquique, 2,706 sks.

Ochre—
Marseilles, 81 brls.
Rouen, 30 cks.

Paraffin Scale—
New York, 655 brls.
Rangoon, 50 bgs.

Phosphate of Lime—
Boca, 1,065 t.

Phosphate Rock—
Ostende, 500 t.

Phosphates—
Charlotte Harbour, Florida, 3,
Ghent, 2,000 bgs.
" 250 t.
Terneuzen, 285

Pitch—
Rotterdam, 15 cks.

Potash Salts—
Hamburg, 500 bgs.

Potashes—
Montreal, 25 brls.
Dunkirk, 2 cks. 14 dms.
Rotterdam, 1

Potassium Carbonate—
Stettin, 21 cks.

Pyrites—
Huelva, 2,034 t.

Rosin—
New York, 1,000 brls.
Boston, 251
Rotterdam, 4 bgs.
Ceara, 96

Salt—
Hamburg, 3 brls.

Saltpetre—
Hamburg, 4 cks.
Calcutta, 2,427 bgs

Soap—
Newport News, 350 bdls.
Marseilles, 7 cs. Cox Bro
" 2 Glasgow Apoth Co.
" 116 135 bxs.
Syra, 3 Andraules Brs.
Smyrna, 2
Naples, 40
Soda—
Smyrna, 1 bg.
Sodium Nitrate—
Antofagasta, 2,280 bgs.
Starch—
Hamburg, 88 cs.
Newport News, 200 sks.
New York, 450 bgs.
Boston, 300
Rotterdam, 120
Antwerp, 40 J. T. Fletcher & Co.
" 120
Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co.
" 38
Sulphur—
Huelva, 1,453 t. Matheson & Co.
Tallow—
Baltimore, 58 brls.
Montreal, 250 tcs
Boston, 305
Rouen, 71 bgs. Co.-op. W'sale Society, Ld.
New York, 10 hds.
Zarate, 169 pks.
Tar—
Dunkirk, 12 cks.
Tartar—
Bordeaux, 4 cks.
Marseilles, 1 brl. Globe Parcel Express
Treacle—
New York, 1,750 brls.
Stettin, 180 cks. Brown, Geveke & Co.
Ultramarine—
Hamburg, 5 cs
Waste Salt—
Hamburg, 10 bgs.
White Lead—
Ghent, 23 brls.
Rotterdam, 75 cks.
Antwerp, 11
Wood Pulp—
Oporto, 203 bls Ciana Timber Co.
Gothenburg, 8 pks. Tullis & Co.
Rotterdam, 122
Zinc Nitrate—
Hamburg, 32 cks.
Zinc Oxide—
Marseilles, 50 brls.
Rotterdam, 25 cks.
Antwerp, 110 37 1,369 plts. 8 cs.
Zinc White—
Rotterdam, 10 cks.

MANCHESTER.

Week ending July 25th.

Acetic Acid—
Rotterdam, 34 blns.
Albumen—
Antwerp, 8 cs.
Aniline Salt—
Rotterdam, 3 cks.
Barytes—
Rotterdam, 12 cks.
Antwerp, 50 bgs.
Carbolic Acid—
Rotterdam, 25 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 10 cks.
Chrome Alum—
Hamburg, 1 ck.
Colours—
Ghent, 4 brls.
Antwerp, 6 cks. 10 cs.
Rotterdam, 18 48 153 40 bxs.
Dyestuffs—
Alizarine
Rotterdam, 15 cks.
Indigo
Rotterdam, 2 chts.
Stettin, 650 bgs. Brown, Geveke, & Co.
[illegible] 535
150
2,305
Gefle 1 Stott, Coker, & Co.
Gluc[illegible]—
Stetti[illegible] 1,000 bgs.
Rotterdam, 10 kgs.
Limestone—
Antwerp, 1 crte 2 cs. J. T. Fletcher & Co.
Litharge—
Rotterdam, 15 cks.
Lithopone—
Stettin, 23 cks.
Logwood—
Yucatan, 12,840 qntls.
Jamaica, 533 t.
Pitch—
Antwerp, 16 cks.
Potash—
Treport, 42 cks.
Potassium Chloride—
Hamburg, 42 cks.
Soap—
Bordeaux, 4 cs.
Rotterdam, 25
Sodium Nitrate—
Rotterdam, 4 cks.
Starch—
Rotterdam, 145 cs.
Hamburg, 100
Antwerp, 120
Tartar—
Bordeaux, 7 cks.
Tartaric Acid—
Rotterdam, 20 blns.
Waste Salt—
Hamburg, 204 bgs. qty.
Wood Pulp—
Hamburg, 162 bdls.
Gefle 1,200 bls. Stott, Coker, & Co.
Zinc Oxide—
Antwerp, 20 brls.
Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending July 25th.

Acids—
Bari, 50 cks. Wilson, Sons, & Co., Ld.
Boston, U.S.A., 25 brls. "
Albumen—
St. Petersburg, 45 cs. Wilson, Sons, & Co., Ld.
Riga, 12 Helmsing & Son
Asbestos—
Reval, 11 bgs. Brekke & Howld
Barytes—
Amsterdam, 25 cks. Hutchinson & Son
Rotterdam, 71 W. & C. L. Ringrose
Bremen, 7 G. Holmes & Co.
" 125 bgs.
Antwerp, 46 Bailey & Leetham
" 138 H. F. Pudsey
Benzoline—
Hamburg, 1 cs. Bailey & Leetham
Camphor—
Hamburg, 1 ck. Wilson, Sons, & Co., Ld.
Castor Oil—
Antwerp, 29 cks. Bailey & Leetham
" 5 brls. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Hamburg, 3 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 18 "
Antwerp, 71 pks. "
Colours—
Rotterdam, 6 cks. Hutchinson
4 brls. 3 bxs. & Son
" 22 13 15 W. & C. L.
20 pks. Ringrose
Stettin, 26 cks.
Hamburg, 2 16 cs. Wilson, Sons, & Co., Ld.
Antwerp, 3 1 cs. Bailey & Leetham
" 14 8 pks. Wilson,
" 17 brls. Sons, & Co., Ld.
Cryolite—
Copenhagen, 2 cks. Wilson, Sons, & Co., Ld.
Dextrine—
Stettin, 130 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 10 W. & C. L. Ringrose
Dyestuffs—
Alizarine
Rotterdam, 6 cks. W. & C. L
10 brls. Ringrose
Fustic
Trieste, 5 t. Wilson, Sons, & Co., Ld.
Myrabolams
Bombay, 2,000 bgs.
Shumac
Palermo, 50 bgs. Wilson, Sons, & Co., Ld.
" 850 pks.
Farina—
Harlingen, 160 bls. Hutchinson & Son
Stettin, 240 bgs Wilson, Sons, & Co., Ld
Ghent, 282 pks. "
Harlingen, 500 bgs. W. & C. L. Ringrose
Gelatine—
Rotterdam, 2 cs. Wilson, Sons, & Co., Ld
Glue—
Rouen, 2 cks. Rawson & Robinson
Stettin, 61 pks. Wilson, Sons, & Co., Ld.
Hamburg, 82 bls. "
Dunkirk, 12 pks. "
Fiume, 21 cks. "
Antwerp 2 "
Ochre—
Rouen, 40 cks. Rawson & Robinson
Oxalic Acid—
Rotterdam, 6 cks. Hutchinson & Son
Paint—
Boston, U.S.A., 14 cs. Wilson, Sons, & Co., Ld.
Phosphate—
Ghent, 80 t. Wilson, Sons, & Co., Ld.
Potash—
Antwerp, 20 dms. Wilson, Sons, & Co., Ld
Pumice Stone—
Messina, 55 pks. Wilson, Sons & Co, Ld.
Quicksilver—
Libau, 100 cylds.
Trieste, 1 btle. Wilson Sons, & Co., Ld.
Saltpetre—
Hamburg, 2 brls. Wilson Sons, & Co., Ld.
Antwerp, 135 bgs. "
Soap—
Molfetta, 301 bxs Wilson, Sons, & Co, Ld.
Starch—
Rotterdam, 72 cs. W. & C. L. Ringrose
Bremen, 1,570 Veltmann & Co.
Antwerp, 70 Bailey & Leetham
" 176 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 10 bgs. Wilson, Sons, & Co, Ld.
" 13
Sulphur—
Catania, 1,973 pks. Wilson, Sons, & Co. Ld.
" 1,377
Tallow—
Copenhagen, 14 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 26 "
Treacle—
Boston, U.S.A., 150 brls. Wilson, Sons, & Co., Ld.
Ultramarine—
Bremen, 12 cks.
Rotterdam, 4 Hutchinson & Son
Waste Salt—
Hamburg, 27 bgs. Wilson, Sons, & Co., Ld.
White Lead—
Amsterdam, 11 cks. W. & C. L. Ringrose
" 30 Hutchinson & Son
Rotterdam, 6 W. & C. L. Ringrose
Wolfram—
Hamburg, 5 cs. Wilson, Sons, & Co., Ld.
Wood Pulp—
Helsingfors, 296 bls. J. Good & Sons
Hamburg, 360 Wilson, Sons, & Co., Ld.
Bergen, 380 pks. "
Trieste, 2,550 "
Zinc Oxide—
Rotterdam, 23 cks. Hutchinson & Son
Zinc White—
Rotterdam, 10 cks. Hutchinson & Son

GLASGOW.

Week ending July 30th.

Acetic Acid—
Rotterdam, 17 cks. J. Rankine & Son
Alumina Sulphate—
Rotterdam, 228 bgs. J. Rankine & Son
Asbestos—
Montreal, 700 bgs.
Barytes—
Rotterdam, 66 brls. 43 pks.
" 63 cks J. Rankine & Son
Castor Oil—
Antwerp, 29 cks.
Leghorn, 10 cs.
Marseilles, 470 brls. 22
Chemicals *(otherwise undescribed)*
Rotterdam, 5 cks. J. Rankine & Son
Baltimore, 10 cs.
Chrome Ore—
Noumea, 247 t. Stevenson, Carlisle, Ld.
Colours—
Rotterdam, 60 pks.
" 8 brls. 1 ck. 1 bx. 1 cs. J. Rankine & Son
Cottonseed Oil—
Baltimore, 5 tcs.
Cream of Tart r—
Marseilles, 2 brls.
Dyestuffs—
Alizarine
Rotterdam, 120 pks.
Extracts
Antwerp, 2 cks.
Gambier
Singapore, 766 bls. D. M'Dougall
Indigo
Rotterdam, 5 cks. J. Rankine & Son
Madder
Marseilles, 7 brls.
French Chalk—
Leghorn, 7 cs.
Glue—
Rouen 10 cks
Lamp Black—
Gothenburg, 15 cks.
Limestone—
Rouen, 1 crate
Ochre—
Rouen, 197 cks.
Marseilles, 20 brls.
Ozokerit—
Hamburg, 2 cs.
Painters' Colours—
Antwerp, 4 cks.
Paraffin Scale—
New York, 180 brls.
Potash—
Rouen, 16 cks.
Montreal, 16 brls.
Hamburg, 60
Pumice Stone—
Leghorn, 50 bls.
Rosin—
New York, 574 brls.
Saltpetre—
Hamburg, 5 cks.
Soap—
Rouen, 50 cs.
Marseilles, 2

Sodium Nitrate—
Rotterdam, 4 cks. J. Rankine & Son

Starch—
Ghent, 80 cs.
Rotterdam, 20 J. Rankine & Son

Tallow—
New York, 40 tierces

Tartaric Acid—
Rotterdam, 11 cks. J. Rankine & Son

Varnish—
Antwerp, 1 dm.
New York, 1 brl.

Waste Salt—
Hamburg, 132 ts.

White Lead—
Rotterdam, 121 cks. J. Rankine & Son

Whiting—
Rouen, 200 bgs.

Wood Pulp—
Christiania, 2 342 bls.
Gothenburg, 7
Skein, 750 W. Grant & Co

Zinc Oxide—
Antwerp, 15 cks.
Rotterdam, 35 J. Rankine & Son

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending July 25th.

Acetic Acid—
Rotterdam, 5 cks. Tyne S. S. Co.

Barytes—
Rotterdam, 22 cks. Tyne S. S. Co.

Castor Oil—
Antwerp, 29 brls. Tyne S. S. Co.

Colours—
Antwerp, 2 brls. Tyne S. S. Co.
Hamburg, 4 cks. ,,
Rotterdam, 3 1 bx. ,,

Limestone—
Antwerp, 8 cs. Tyne S. S. Co.

Paint—
Gothenburg, 1 kg.

Pyrites—
Huelva, 2,610 t. Scott Bros.

Starch—
Rotterdam, 100 cs. Tyne S. S. Co.

Tartaric Acid—
Rotterdam, 20 cks. Tyne S. S. Co.

Wood Pulp—
Hamburg, 233 bls. Tyne S. S. Co
Christiania, 150

Zinc Sulphate—
Gothenburg, 60 c.

GOOLE.

Week ending July 22nd.

Alizarine—
Rotterdam, 93 cks. 1 cs.

Alkali—
Calais, 6 cks.

Alum—
Rotterdam, 50 bgs.

Antimony—
Boulogne, 4 cks.

Caoutchouc—
Boulogne, 2 cks.

Colours—
Hamburg, 57 cks. 8 cs.

Dyestuffs *(otherwise undescribed)*
Boulogne, 34 cks.
Rotterdam, 48 cs. 406 brls.

Farina—
Delfszyhl, 500 bgs.

Glue—
Rotterdam, 10 bgs
Hamburg, 4 cks.

Potash—
Calais, 23 dms.
Antwerp, 1 ck. 4

Saltpetre—
Rotterdam, 100 bgs.
Hamburg, 20 cks.

Sodium Silicate—
Rotterdam, 1 ck.

Starch—
Ghent, 32 cs.

Tar—
Rotterdam, 39 cks.

Waste Salt—
Hamburg, 230 t.

GRIMSBY

Week ending July

Albumen—
Hamburg, 5 cs.

Caoutchouc—
Rotterdam, 2 cs.
Hamburg, 17 bls. 3

Chemicals *(otherwise un*
Antwerp, 7 cs.
Hamburg, 27
Rotterdam,
Dieppe,

Colours—
Hamburg, 87 cks. 10 cs.
Antwerp, 13

Dyes—
Antwerp, 24 pks.

Farina—
Hamburg, 100 bgs.

Wood Pulp—
Malmo, 320 bls.
Gothenburg, 540
Hamburg, 26

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending July 29th.

Acetic Acid—
Launceston, 4 cs. £6

Acid and Ammonia (Liquid)—
Bombay, 8 cs. £24

Alkali—
Dunedin, 1 t. 1 c. £44
Constantinople, 6 5

Ammonia—
Wanganui, 8 c. £44

Ammonium Carbonate—
B. Ayres, 1 t. 19 c. £56
St. Petersburg, 20 565
Adelaide, 15 27
Sydney, 5 10
Rouen, 42 pks. 140

Ammonium Chloride—
Melbourne, 13 c. £19
Otago, 6 10
Bourgas, 1 t. 10 51
Busreh, 10 cks. 34
Varna, 15 26
Cologne, 9 58
Dusseldorf, 5 110
Antwerp, 10 72

Ammonium Sulphate—
Dunkirk, 34 t. 10 c. £285

Anhydrous Ammonia—
Dusseldorf, 25 cylds. £90
Mauritius, 6 cs. 30

Arsenic—
Calcutta, 2 t. £50
Canterbury, 1 24
Amsterdam, 10 cks. 50

Bisulphite of Lime—
Sydney, 10 t. £38

Bleaching Powder—
Rio de Janeiro, 10 c. £33

Bone Ash—
Havre, 50 t. £160

Borax—
Harlingen, 10 cs. £12
Otago, 10 c 11
Adelaide, 3 t. 1 38

Carbolic Acid—
Bombay, 5 cs. £20
Auckland, 10 drs. 9

Carbonic Acid Gas—
Jersey, 37 carboys £14

Caustic Soda—
Newcastle, 40 t. 1 c. £360
Natal, 15 12
Christchurch, 2 8 38
Philadelphia, 66 19 491
Melbourne, 5 99
Auckland, 5 37
Dunedin, 1 1 53
E. London, 16 21
Pt. Darwin, 2 3
Algoa Bay, 5 6

Chemicals *(otherwise undescribed)*
Paris, 15 cks. £36
B. Ayres, 2 cs. 48
Rotterdam, 2 5 t. 19 c. 77
Melbourne, 25 cks. 80
Stockholm, 8 pks. 31
New York, 25 120
Demerara, 100 cs. 132
Monte Video, 3 c. 13
Boulogne, 6 pks. 58
Dunkirk, 5 t. 1 c. 60
Sydney, 11 cs. 25
Bombay, 10 39

Citric Acid—
Santander, 2 c. £13
Brussels, 7 cks. 21 kgs. 244
Bombay, 3 23
Melbourne, 2 t. 10 20 420
Odessa, 18 113
Natal, 2 13
Sydney, 1 10 178
Hamburg, 3 30 370
Genoa, 20 120
Antwerp, 1 39
Rotterdam, 9 58
Launceston, 2 12
Dunedin, 1 7
Amsterdam, 7 45
Fremantle, 2 13
Beira, 4 26

Coal Products—
Alizarine
Bordeaux, 22 pks. £478
Montreal, 10 cks. 103
Aniline Oil
Genoa, 23 dms. £900
Ghent, 4 cks. 90
Dunkirk, 10 drs. 400
Aniline Salt
Venice, 5 cks. £40
Anthracene
Rotterdam, 116 cks. £775
Benzol
Rotterdam, 24 cks. £96
Hamburg, 50 50 brls. 358
Creosote
Philadelphia, 950 bgs. £116
New York, 2,024 918
Naphtha
Christchurch, 10 cits. £15
Lyttelton, 20 30
Wellington, 20 dms. 16
Hamburg, 500 bgs. 250
Naphthaline
Rotterdam, 699 bgs. £151
Antwerp 1,005 138
Hamburg, 84 6 cks. 78 pks. 138
Cologne, 2 19
Pitch
Pt. Said, 40 cks. £146
New York, 500 300 brls. 456
Newcastle, 20 18
Newport News 1,060 bgs. 360
Brest, 164 t. 300
Alexandria, 650 219
Pyridine
Amsterdam, 12 cs. £124
Tar
Helsingfors, 800 brls. £460
Hamburg, 6 20
Beira, 120 dms. 45
Newcastle, 10 runlts. 13
Algoa Bay, 260 50 cks. 44
Tar Oil
Gothenburg, 30 cks. £25
Tar Salts
Hamburg, 100 bgs. £60
Adelaide, 150 drs. 31
Newcastle, 10 runlts. 16
Toluol
Amsterdam, 43 cks. £181

Coal Products *(otherwise undes.)*—
Sydney, 400 dms. £82

Copper Sulphate—
Marseilles, 20 t. £363
Paris, 50 906
Bordeaux, 22 10 c. 408
Libau, 12 11
Bombay, 1 10 26
Malta, 2 10 50

Cream of Tartar—
Adelaide, 3 t. 10 c. £345
Fremantle, 7 39
Newcastle, 15 74
Hobart, 1 tank 10 kgs. 2 cs. 79
Dunedin, 5 c. 24
Christchurch, 1 97
Sydney, 40 kgs. 195
Launceston, 15 78
Cape Town, 5 24
Natal, 2 12
Brisbane, 1 1 98

Cyanide—
Fremantle, 9 c. £102

Disinfectants—
Cape Town, 120 cks. £54
Antigua, 2 14
Hong Kong, 14 cs. 20
Wellington, 15 33
Bombay, 4 t. 275 dms. 181
Penang, 5 cks. 150 89
Sydney, 10 pks. 200 81 189
Rangoon, 30
Melbourne, 9 t. 11 c.
Singapore, 10 dms.

Guano—
Bombay, 1 t. 10 c.

Manure—
Memel, 700 l.
Canaria, 27 10 c.
Burght, 134
Grenada, 10
Gothenburg, 49 5
Riga, 395 9

Nitric Acid—
Guernsey, 10 carboys

Phosphoric Acid—
Havre, 10 t.

Phosphorus—
Melbourne, 2 cs.
Wellington, 6

Potash—
B. Ayres, 10 c.

Potash Crystals—
Brussels, 4 cs.

Potash Salts—
Delagoa Bay, 34 t. 7 c.
Auckland 5

Potassium Carbonate—
Santander, 1 t. 3 c.

Potassium Cyanide—
Delagoa Bay, 1 t.
Shanghai, 13 c.
Melbourne, 30 cs.
Sydney, 5
Townsville, 3 13

Potassium Permanganate
Calcutta, 3 c.

Potassium Prussiate—
Antwerp, 13 cks.

Salicylic Acid—
Melbourne, 10 l.

Saltpetre—
Dunedin, 10 c.
Piræus, 1 t.
Vigo, 3 14
Oporto, 2 13
Ghent, 13
Savanilla, 2 10
Newcastle, 10
Sydney, 1
Rio de Janeiro, 4 17

Sheep Dip—
Natal, 2 c.
Calcutta, 62 pks.
Nelson, 30 cs.
B. Ayres, 20 13 t. 8 c.

rystals—
2 t. 6 c. £6
a Bicarbonate—
tar, 1 c. £7
ntle, 1 t. 2 14
t, 1 20 kgs. 15
Bay, 18 13
lles, 6 45
a Carbonate—
Janeiro, 4 c. £11
a Nitrate—
y, 10 c. £10
a Sulphate—
50 t. £75
a Tartrate—
o, 11 c. £39
ium Nitrate—
ork, 4 t. 7 c. £103
elphia, 2 13 50
r—
May, 3 t. 7 c. £37
ston, 1 6
lla, 10 10
, 2 11
own, 13 8 135
ric Acid—
own, 1 t. 10 c. £13
, 3 10 18
oes 20 drs. 10
ic Acid—
5 c. £3
-ton, 4 26
le, 14 kgs 1 t 13 313
hurch, 2 cs. 12 62
ttle, 3 52
ttle, 1 t 3 152
2 cs. 15
n, 3 20
, 15 95
Bay, 5 31
e, 5 41
2 14
gton, 8 54
rne, 2 10 309
pis—
la, 1 ck, £19

VERPOOL.

ek ending July 29th

atal, 5 t. 5 c. £27
, 7 15 20
1 5 6
rne, 1 5
a Sulphate—
r Mills, 10 t. 2 c. £46
ium—
5 c.
ium Carbonate—
na, 5 c. £7
10 23
1 t. 3 2 q. 34
1 27
10 27
i m Chloride—
dria, 2 t £70
agen 1 20
al, 11 c. 11
1 1 21
rg, 2 1 3 q. 48
19 32
na, 13 1 23
11 10
15 25
4 2 10
ium Sulphate—
n, 35 t. 3 q. £350
ig, 98 1 c. 2 753
, 30 7 2 245
ncisco, 101 18 3 825
rk, 25 5 273
ay, 24 199
15 8 3 126
ya, 302 12 2 410
100 1,000
mas, 32 2 267
s—
o, 1 cs.
ng Powder—
ria, 12 c. £7
am 18 cks
re, 132
361
e, 30
132
l, 160
23
t News, 397
rk, 416
7

Rosairo, 20 brls.
Venice, 41
Vera Cruz, 30
Bone Ash—
Caldera, 5 c. £7
Boracic Acid—
Vera Cruz, 5 c. £8
Havre, 1 t. 1 3 q. 35
Montreal, 15 3 26
Boston, 4 114
Sydney, 2 6 75
Borax—
Valencia, 3 t. 10 c. 2 q. £71
Stockholm, 3 16 3 72
B. Ayres, 13 40
Vera Cruz, 1 12 32
Shanghai, 1 3 3 24
Montreal, 1 3 2 24
Rotterdam, 34 2 2 668
Hamburg, 35 1 700
Sydney, 1 10 33
M. Video, 2 40
Calcium—
Boston, 50 t. 4 c £102
Calcium Chloride—
Montreal, 2 t £8
Ca b lic Acid—
Accra, 20 dms. £7
Newport News, 11 t. 273
Sydney, 10 c. 1 q. 8
Philadelphia, 9 19 221
Santander, 19 3 65
Bordeaux, 7 7
New York, 3 13 2 9
Rotterdam, 13 14 175
B Ayres. 8 17 2 250
Carbon Bisulphide—
Para, 4 c £6
C us ic Potash—
B. Ayres. 2 t 15 c. £82
Caustic Soda—
Alexandria, 17 dms.
Amsterdam, 85
Antwerp, 30
Baltimore, 215
Bahia, 40
Barcelona, 682 2 cks.
Bari, 32
Boston, 100
Calcutta, 30
Callao, 50
Cartagena, Sp., 6
Ceara, 30
Corunna 16 26 brls.
Fairwater 120
East St Louis, 200
Fiume, 22
Galatz, 82
Catania, 65
Genoa, 174
Hamburg, 16
Havana, 60
Hong Kong 35
Ibrail 30
Konigsberg, 15
La Guayra 21
Leghorn, 18
Lisbon 272
Malaga. 50
Malta, 35
Maracaibo, 10
Melbourne, 132
Messina, 160
M Video, 100
Montreal, 25
Naples, 34
New Fairwater, 90
N Orleans, 50
New York 459
Nuevitas, 40
Oporto, 128
Pernambuco, 125
Philadelphia, 205
Puerto Cabello, 20
Rio de Janeiro, 20
Rotterdam, 46 pks.
St. John, N'fld., 50
St. Petersburg, 50
Samarang, 11
San Francisco, 100
San Sebastian, 28
Santos, 50
Savanilla, 45
Stettin, 53
Stockholm, 5
Talcahuano, 30
Valparaiso, 100
Wellington, 15
Chemicals *(otherwise undescribed)*
Odessa, 5 t. £146
Calcutta, 10 6 c. 34
New York, 5 165
Philadelphia, 13 14 449
Montreal, 5 7 110

Toronto, 1 33
Genoa, 2 60
Stockholm, 2 59
Gefle, 10 14
Stettin, 1 18 57
Boston, 38 2 1 q. 163
Bremen, 15 21
Christiania, 12 2 23
Alexandria, 2 70
Ghent, 7 12
Hamburg, 2 14 103
China Clay—
Bilbao, 100 bgs.
Bombay, 40
Boston, 849 cks.
Genoa, 100
New York, 100
Philadelphia, 200
Santos, 30
Coal Products—
Aniline Colours
New York, 10 cks.
Aniline Salt
Barcelona, 20 cks.
Boston. 13 5 dms.
New York, 14
Philadelphia, 20 cs.
Anthracene
Antwerp 10 t. 15 c.
Naphtha
Melbourne 25 dms.
Naphthaline
Rotterdam, 160 bgs.
Pitch
Rouen, 2 cks.
Tar
Batavia, 57 brls
Galatz, 75
Ibrail, 40
Samarang, 65
Sourabaya, 39
Cobalt Oxide—
Antwerp, 2 c. £13
Copper Sulphate—
Galatz. 5 t. £86
Bourgas, 9 c. 9
Philadelphia, 1 8 73
Copenhagen, 1 7 26
Wellington, N.Z., 10 9
Danzig, 1 19 2 q. 32
St. Petersburg, 15 1 3 256
Sydney, 11 10 200
Bordeaux, 8 4 1 138
M. Video, 8 1 133
Odessa, 24 12 1 412
Cresylic Acid—
New York, 2 t. 4 c. £23
Disinfectants—
Valparaiso, 30 cs. £17
Calcutta, 8 cks. 2 2 dms. 9
Alexandria, 3 t. 18 c. 3 q. 124
Napier, N.Z., 8 11
New York, 19 15
St. John's, N fld. 15 7
Dyestuffs *(otherwise undescribed)*
Bombay. 9 kgs.
Gypsum—
New York, 36 t. 6 c. £116
Indigo Waste—
New York, 5 t. 14 c. £133
Iron Oxide—
Montreal, 17 c. 2 q. £6
Lime—
Durban, 17 t. £40
Port Natal, 49 2 c. 42
Magnesia—
Adelaide, 10 cs.
Trieste, 1 £30
Magnesium Chloride—
St. Petersburg, 10 t. 4 c. £27
Rouen 10 4 1 q. 25
Manganese Oxide—
Corunna, 4 c. £4
Manure—
Barbadoes, 9 t. 17 c. £50
Gd. Canary, 45 241
Sourabaya. 50 170
Naphthaline—
Rotterdam, 11 t. 7 c. £75
Ochre—
E. London, 30 brls.
Oxalic Acid—
Syra, 6 c. £11
M. Video, 2 4
Paint—
Baltimore, 100 cks.
Bangkok, 40 kgs.
Beyrout, 10
Bonny, 5 cs.
Brisbane, 8
B. Ayres, 50
Callao, 55

Cape Town, 2 58 18
120 dms.
Ceara, 4
Constantinople, 2 brls. 50 dms.
Corinto 4 cs. 20
Cortavio, 4 cks.
Danzig, 100 bgs.
E. London, 10
Ferrol, 1
Galata, 100
Galatz, 100
Genoa, 3 3 cs.
Colon, 4
Gothenburg, 30 bgs.
Hamburg, 100
Havana, 20 dms.
Ibrail, 17 50
Iquique, 50 75 cs.
Jaffa, 3
Kingston, 50 tins 12 261
Larnaca, 4
Leghorn, 1 1
Lisbon, 5 1 13
Maceio, 16 brls.
Malaga, 12
Malta, 6
Manaos 16 14
Maracaibo. 150
Mayaquez, 8
Messina, 4
Mollendo, 9 50
M. Video 12 37
Montreal, 17 19
N. Orleans, 104
New York, 8 40 14
Old Calabar, 5
Odessa, 140
St. John's, N'fld., 3
Smyrna, 550
Painters Colours—
Accra, 4 cks.
Antwerp, 6 kgs. 6 brls.
Batavia, 5
Bonny, 9 cs.
Bremen, 50 bgs.
B Ayres, 21 cs.
New York, 175 50 20
Odessa, 117
Old Calabar, 161 cs.
Oporto, 19
Oporto, 4
Para, 28 tcs. 8 160 42 brls.
Pernambuco, 82 10 cs.
Port Natal, 670 24
Rotterdam, 15 18 3
40 bgs.
St John, N B., 6
San Juan, 100 5 brls.
Santos, 1 cs.
Singapore, 3
Talcahuano, 12
Paraffin Wax—
Bari. 20 bgs
Leghorn, 15
Pernambuco, 70 dms.
Phosphorus—
Shanghai, 8 c. 2 q. £58
Vera Cruz, 2 1 22
B. Ayres, 1 1 11
Hiogo, 3 t. 13 3 841
Yokohama, 10 113
Nagasaki 8 50
Potassium Bichromate—
Ancona, 10 c. £24
Rouen, 5 t. 18 3 q 235
Potassium Carbonate—
Boston, 8 t. 17 c. £154
N. York, 12 7 220
Potassium Chlorate—
N York, 8 t. 10 c. £330
Wexio, 2 79
Boston, 2 10 98
St. Petersburg, 3 116
Gutujewsky, 32 10 1,288
Mexico City, 1 40
Konigsberg, 2 5 89
Philadelphia, 5 198
Lisbon, 2 80
Calcutta, 1 40
Shanghai, 7 10 293
Potassium Prussiate—
Genoa, 2 t. 14 c. £120
Barcelona, 10 23
Salt—
Akassa, 936 t.
Antwerp, 70
Baltimore, 1,550
Barbadoes, 25
Boston, 325
B. Ayres, 145
Calcutta, 2,438
Cape Coast, 81
C. C. Castle, 25
Cape Town, 130 18

Christiania, 10 2
Egwanga, 20
Ghent, 350
Halifax, 119
Havana, 4
Kingston, 90
Lagos, 40
Maranham, 71
Monte Video, 6 11
Montreal, 965
Napier, 325
Newcastle, 105
New Orleans, 50
New York, 74
Opobo, 70
Para, 31 5
Pernambuco, 30 cs.
Philadelphia, 382
Port Natal, 1,123 6
Quebec, 745 10
Rotterdam, 124
Savannah, 760
Shanghai, 17
Sherbrooke, 22 6
Stockholm, 193 2
Sydney, 184 17
Trinidad, 53 8
Wellington, 76 10

Saltpetre—
Santos, 2 t. 8 c. 1 q. £57
Maceio, 1 19 3 45

Satinite—
Helsingborg, 5 t. £15

Sheep Dip—
B. Ayres, 4 t. £1,970
Sydney, 100 cs. 187

Soap—
Accra, 1,110 bxs.
Alexandria, 40 kgs.
Algoa Bay, 700
Amsterdam, 1,470
Antigua, 160 6 bdls.
Antwerp, 1,500 cs.
Baltimore, 20
Barbadoes, 100 200
Benin, 119
Bombay, 462
Boston, 500
Calcutta, 5 13
C. C. Castle, 350
Cape Town, 255 1,353
Cartagena, N.G., 110
Christiania, 135 114 10 bdls.
Copenhagen, 50
Curacao, 268
Delagoa Bay, 162 10
Dominica, 50
E. London, 2,400 11
Fremantle, 800
Genoa, 200 20
Ghent, 10
Gibraltar, 100
Guayaquil, 1
Grand Lahou, 150
Hamburg, 1
Havre, 1
Kingston, 100
Lagos, 20
Lanzarote, 45
Manaos, 250
Melilla, 25
New Orleans, 200
" York, 608
Para, 200
Parnahyba, 30
Pernambuca, 500
Piræus, 5
Pt. Elizabeth, 150 16 kgs.
Pt. Natal, 950 130 11 bdls. 40 dms.
Pt. Alegre, 4
Rotterdam, 400
St. John's, Nfld., 140
Savanilla, 8
Shanghai, 5,072 1 bdl.
Singapore, 225 110
Sinoe, 73
Sydney, 4,000
Trieste, 2
Teneriffe, 100
Trinidad, 730
Valparaiso, 30 dms.

Soda—
Genoa, 110 dms.

Soda Alkali—
Genoa, 70 brls.
Leghorn, 48

Soda Ash—
Adelaide, 211 cks.
Antwerp, 107 kgs
Baltimore, 17 336 bgs
Barcelona, 40
Boston, 158 tcs. 72 1,280
Bremen, 100
B. Ayres, 150 100 brls.
Calcutta, 152 100 kgs.
Chefoo, 50 brls.
Copenhagen, 270
Corfu, 10
E. London, 40 kgs.
Fremantle, 35
Genoa, 170
Ghent, 7 50
Hong Kong, 6
Leghorn, 16 brls.
Hamburg, 50 50
Lisbon, 22
M. Video, 20
Montreal, 15 56 f
N. Orleans, 16 tcs.
New York, 21 200 1,000
Oporto, 10
Parnahyba, 15 brls.
Pernambuco, 127 1,000
Piræus, 30
Porto Alegre, 100 cks.
Rio de Janeiro, 20 200 brls.
Rio Grande do Sul, 40
St. Petersburg, 9
Samarang, 6
Smyrna, 650
Syra, 50
Yokohama, 100

Soda Crystals—
Alexandria, 100 brls.
Bombay, 305 kgs.
Boston, 40 250 bgs. 14 cks.
B. Ayres, 100 4
Calcutta, 66
Halifax, 40
Lisbon, 27
Montreal, 415
Pernambuco, 140
Philadelphia, 420
St. John's N'fd., 34 25
Samarang, 10
Sydney, 70

Sodium (Metal)
Rotterdam, 5 t. £83 0

Sodium Bicarbonate—
Aalborg, 17 kgs. 2 cks.
Alexandria, 3
Algoa Bay, 20
Ancona, 121
Baltimore, 150
Barcelona, 905
Bordeaux, 13
Boston, 175
B. Ayres, 30
Calcutta, 757
Cape Coast, 25
Christiania, 147 2
Constantinople, 72 10 brls.
Genoa, 82
Ghent, 10 2 bgs.
Gibraltar, 20
Gutujewski, 100
Halifax, 100
Hamburg, 80 18
Hong Kong, 30
Kingston, 10
Malta, 15 20
Marseilles, 130
Melbourne, 8 brls.
Montreal, 260 50 bgs.
Nantes, 55
Naples, 160 3
Newcastle, 80
Newport News, 180
Odessa, 60
Oporto, 113
Paris, 100
Pt. Natal, 20
Rostock, 2
Rotterdam, 50
Rouen, 70
St. John's, N'fd., 155
San Francisco, 40
Stockholm, 50 10
Sydney, 700
Valencia, 15
Yokohama, 500

Sodium Bichromate—
Hamburg, 6 cks.
New York, 2

Sodium Carbonate—
Amsterdam, 12 brls.
Boston, 56
Porto Alegre, 2 cks.

Sodium Chlorate—
Danzig, 20 bgs.
Fremantle, 3 brls.

Sodium Peroxide—
Hong Kong, 8 cs.

Sodium Silicate—
Boston, 40 dms.
Calcutta, 7 tins
Salonica, 10 cks.

Sodium Sulphate—
Montreal, 51 cks.

Starch—
Ferrol, 50 bgs.

Sulphur—
Frontera, 8 c. £6
Maceio, 7 -2
Boston, 170 t. 14 570
Copenhagen, 10 1 36
Savanilla, 1 7
Cape Town, 17 3 q 7

Superphosphates—
Las Palmas, 5 t. £10
Stettin, 750 812
Bilbao, 197 1 c. 331
Gd. Canary, 8 28

Yarnish—
Callao, 2 cs.
Constantinople, 1
Genoa, 6
Orotava, 3

Zinc Chloride—
Bahia, 3 t. 9 c. 3 q. £27

Zinc Oxide—
Corunna, 8 c. £8

MANCHESTER.

Week ending July 29th.

Alum—
Merseyne, 20 brls.

Aluminium—
Paris, 1 bx.

Ammonium Carbonate—
Hamburg, 10 kgs.
Christiania, 10
Rotterdam, 20

Ammonium Sulphate—
Valencia, 796 bgs.

Aniline Colours—
Barcelona, 2 cks.
Paris, 2 kgs.

Aniline Oil—
St. Petersburg, 10 dms.

Aniline Salt—
Alexandretta, 21 cks.

Benzol—
Rotterdam, 25 cks.

Carbolic Acid—
Rotterdam, 25 cks.

Caustic Soda—
Sfax, 5 dms.

Chemicals (*otherwise undescribed*)
Beyrout, 20 cks.

Copperas—
Alexandria, 173 cks.
Mohammerah, 100 brls.

Cottonseed Oil—
Larnaca, 10 brls.
Sfax, 2
Tunis, 35

Creosote Salts—
Barcelona, 19 cks.

Farina—
Rotterdam, 40 sks.

Glue—
Rotterdam, 10 cks.

Glue and Soap—
Barcelona, 19 cks.

Linseed Oil—
Alexandria, 5 brls.

Magnesium Sulphate—
Tripoli, 1 brl.

Ochre—
Gibraltar, 20 cks.

Painters' Colours—
Gibraltar, 60 kgs.

Pitch—
La Rochelle, 1,020 t.

Soap—
Tripoli, 1 cs.

Sodium Silicate—
Hamburg, 10 brls.
Sfax, 5 cks.

Tar Salts—
Copenhagen, 57 bgs.

Tartaric Acid—
Antwerp, 1 cs.

Toluol—
Rotterdam, 119 cks.

Turpentine—
Tripoli, 1 dm.

HULL.

Week ending July

Alkali—
Genoa, 150 kgs.
Leghorn, 100 bgs.
Stettin, 8 cks.
Wyburg, 20

Barium Carbonate—
Stettin, 100 t.

Caustic Soda—
Helsingfors, 1 ck.
Wyburg, 31

Chemicals (*otherwise un*
Antwerp, 1 ck. 2 cs.
Amsterdam,
Christiania, 8
1,043 slbs.
Drontheim,
Danzig, 9
Gothenburg, 6
Genoa, 10 10
Ghent.
Helsingfors, 6
Hamburg, 4 58
Leghorn, 1
Naples, 5
Riga, 1
Rotterdam, 19 20
St Petersburg, 1 4
Stettin, 51 1
Wyburg, 1

Coal Products (*otherwise*
Amsterdam, 91 cks.

Cottonseed Oil—
Antwerp, 941 c.
Amsterdam, 401
Bremen, 322
Christiansand, 18
Dunkirk, 107
Gothenburg, 204
Hamburg, 445
Konigsberg 251
Rotterdam, 487
Stockholm, 250

Creosote—
Boston 3 brls
Copenhagen, 30 cks.
Stettin, 2

Dyestuffs (*otherwise un*
Christiania, 84 bgs.
Danzig, 5 cs.
Gothenburg, 5 cks.
Riga, 1 1
St. Petersburg, 124

Glue—
Wyburg, 5 cks.

Linseed Oil—
Antwerp, 87 c.
Bergen, 38
Bordeaux, 35
Christiansund, 53
Drontheim, 306
Genoa, 17
Hamburg, 248
Christiania, 505

Manure—
Stettin, 2,000 bgs.
Dunkirk, 160 t.

Ochre—
Amsterdam, 16 cks.

Painters' Colours—
Antwerp, 36 cks. 141
Amsterdam, 1 2
Boston, 7 1
Copenhagen, 23
Christiania, 1 cs.
Drontheim, 11
Danzig, 25
Gothenburg, 40 2
Genoa, 42
Ghent, 5 1
Helsingfors, 5
Hamburg, 34 2
Harlingen, 1
Konigsberg, 25 10
Leghorn, 6
Rotterdam, 1 1
St. Petersburg, 68 1
Stettin, 24 43
Stockholm, 1

Pitch—
Boston, 50 cks.

Plumbago—
Amsterdam, 28 brls.

Soap—
Copenhagen, 2 cs.
St. Petersburg, 3 cks.

Tallow—
Harlingen, 35 cks.
Leghorn, 30
Rotterdam, 1
Stockholm, 5

irk, 30 cks.
a, 550 brls.
ingfors, 100
burg, 1 cs.
erdam, 9
etersburg, 26
urg, 25

ish—
ig, 2 cs.
enburg, 3 dms.
t, 2
ingfors, 4
burg, 3 cks 1
ngen, 1
io, 17

GLASGOW.

Week ending July 30th.

nen—
A., £196

ine—
ch, £21. 10s.

onium Sulphate—
ochelle, 154 t.
burg, 50 12 c.
lona, 20 5
York, 25 12
icia, 72 9¼

s—
ch, £26

ne—
e, £35

hing Powder—
ey, 5 t. 19½ c.
A., 7 8
raiso, 1 5¼

t—
real £130

chouc—
va, £20

lic Acid—
erdam, £9

nate of Lime—
n, 2 t. 14 c.

r Oil—
ey, £57. 15s.

icals *(otherwise undes.)—*
alia, £124.
o, 21 17s.
pore, 82 10

Products—
iline Dye
tta, £30
iline Salt
n, 7 c.
osote
e, £1,630
osote Oil
A., £83
e, 550

phtha
, £137
n, 70
phthaline
e, £30
ch
ocheile, £1,089
ay, 27
enburg, 145
e, 370 t. 18 c.
real, 65
A., 200
da, 506
r
da £100
tta, £156. 10s.
tiania, 5
chi 25 10

ras—
ay, £23

Blood—
es, 5 t. 7 c.

uffs *(otherwise undes.)—*
alia, £26. 18s.
ich, 60 13
ourne, 33

cts—
da, £363
n, 61
real, £78. 9s.
tiania, 13 15
enburg, 68
tephens, N.B., 168
, 89 17

a—
A., 2 t. 10 c.

Gelatine—
Canada, £160

Glue—
Canada, £20

Iodine—
Rotterdam, £750

Linseed Oil—
Algoa Bay, 1 t. 7 c.
Mauritius, 2 10
Singapore, 11
Melbourne, 2 1
Mollendo, 2 8
Sydney, 8 6½
Townsville, 3 8¾
Valparaiso, 2 2½
Canada, 7 6¾
Adelaide, 7 4½

Litharge—
Montreal, £230

Logwood—
Canada, £48. 13s.
Lisbon, 22
Australia, 88 16

Madder—
Ipswich, £46. 15s.

Magnesium Sulphate—
Christiania, £20
Melbourne, 68

Manganese—
Rotterdam, 17 c.

Manganese Oxide—
U.S.A., 12 t. 9 c.

Paint—
Bombay, £37
Cape Town, 35
Colombo, 38
Sydney, 80
Townsville, 128
Penang, 24

Painters' Colours—
Hiogo, £37
Mauritius, 270
Singapore, £75 10s.
Adelaide, £78
Auckland, 75
Bombay, 17 c.
Sydney, 426

Paraffin Wax—
Cape Town, 4 t. 11¾ c.
France, £140
Barcelona, 7 13¼

Potassium Bichromate—
Rouen, £362
Australia, 21
Canada, 443
Ghent, 187
Sydney, 50
U.S.A., 571
Rotterdam, 197
Antwerp, 594

Rosin Oil—
Amsterdam, £50
Rotterdam, 7

Saltpetre—
Rotterdam, 1 t. 2 c.

Sheep Dip—
Sydney, £636

Soap
E. London, 2 t. 10 c.
Grenada, 1 6¾
Bombay, 4 12¾
Melbourne, 4¾

Sodium Bichromate—
Rouen, 5 t. 8¾ c.
U.S.A., 3 3¾

Sulphuric Acid—
Colombo, £35
Demerara, 20

Tallow—
Oporto, 1 t. 1 c
Rotterdam, 8 18

Tartar
Ipswich, £53

Treacle—
E. London, 2 t.
Christiania, 20 14 c.
Gothenburg, 26 8

Varnish—
Hong Kong, £28
Shanghai, 28
Christiania, 5

White Lead—
Huelva, £78
Sydney, 35
Hong Kong, 92

Zinc Ashes—
Rotterdam, 16 t. 15 c.

TYNE.

Week ending July 25th.

Alkali—
Rotterdam, 2 t. 9 c.
Riga, 14 6
Hamburg, 5 10
Amsterdam, 67
St. Petersburg, 43 1

Ammonia—
Christiania, 11 c.
Villa Real, 6

Ammonium Carbonate—
Aarhuus, 17 c.

Ammonium Sulphate—
San Francisco, 76 t. 13 c.

Antimony—
Rotterdam, 7 t.
Hamburg, 1
Montreal, 3

Arsenic—
Ancona, 3 c.

Asbestos—
Antwerp, 15 lbs.

Barium—
Genoa, 2 t. 13 c.

Barium Carbonate—
St. Petersburg, 15 t.

Barytes—
Hamburg, 166 t. 17 c.

Bleaching Powder—
Lisbon, 10 t. 2 c.
Malta, 10 2
San Francisco, 18 3
Gothenburg, 30 4
Amsterdam, 28 3
Antwerp, 43 1
St. Petersburg, 93 5
Hamburg, 2 3

Borax—
Aarhuus, 1 t. 1 c.

Caustic Soda—
Lisbon, 13 t. 18 c.
Malta, 26 6
Piræus, 14 10
Gefle, 4 18
Stockholm, 34 15
Harlingen, 4 18
Gothenburg, 4 18
Amsterdam, 11 9
Hamburg, 1 9
Ancona, 14 10
Genoa, 64 6
Montreal, 14 10

Glue—
Gothenburg, 10 c.

Linseed Oil—
Montreal, 5 t.

Litharge—
Lisbon, 2 t. 2 c.
Christiania, 6
Stockholm, 7 1
Riga, 2 7
Amsterdam, 5
St. Petersburg, 5 3
Hamburg, 1 2
Montreal, 12 1

Magnesia—
Malta, 11 c.
St. Petersburg, 1 t. 7
Hamburg, 13
Genoa, 6 7

Magnesium Sulphate
Christiania, 5 t. 1 c.

Manure—
Genoa, 125 t.
Riga, 582 11 c.
Villa Real, 10

Naphtha—
Villa Real, 10 t. 16 c.

Ochre—
Christiania, 3 t. 4 c.
Montreal, 19

Paint—
Stockholm, 2 c.
Rotterdam, 1 t.
Antwerp, 4 8
Hamburg, 13
Villa Real, 16

Pyrites—
Huelva, 162 t. 10 c.

Saltpetre—
Aarhuus, 5 t.

Slag—
Rotterdam, 167 t.

Soap—
Christiania, 1 c.

Soda—
Amsterdam, 9 t. 17 c.
Malta, 16 5
Christiania, 15 6
Gefle, 19 19
Stockholm, 14 13
Aalborg, 3 15
Rotterdam, 20
Aarhuus, 1 3
St. Petersburg, 10 5
Ancona, 14 19
Genoa, 5
Villa Real, 1 19

Soda Ash—
Bergen, 6 t. 1 c.
Gothenburg, 5 9
Antwerp, 6 17

Sodium Silicate—
Genoa, 5 t. 14 c.
Lisbon, 9 4
Piræus, 20 10

Sulphur—
Gothenburg, 50 t.
Riga, 125
Antwerp, 10 1 c.
Gefle, 50

Tallow—
Genoa, 6 t. 3 c.

White Lead—
Lisbon, 5 t. 5 c.
Stockholm, 1 5
Villa Real, 12
Montreal, 25 2

Whiting—
Montreal, 4 t. 1 c.

GOOLE.

Week ending July 22nd.

Benzol—
Boulogne, 1 ck.
Rotterdam, 197

Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Harlingen, 2

Coal Products *(otherwise undes.)—*
Antwerp, 75 cks.
Boulogne, 51 1 cs. 2 dms.
Rotterdam, 100

Colours—
Jersey, 1 ck.

Dyestuffs *(otherwise undescribed)*
Antwerp, 1 cs.
Ghent, 2 cks.
Hamburg, 2 64 bgs.
Rotterdam, 4 2

Manure—
Hamburg, 20 t.

Painters' Colours—
Amsterdam, 5 cks.
Boulogne, 8 cs. 2 pks.
Calais, 12 tins
Dunkirk, 14 dms.
Ghent, 2 4
Hamburg, 3 1
Harlingen, 44
Rotterdam, 2

Paint—
Antwerp, 203 t.

Soap—
Ghent, 12 cks. 1 cs.

GRIMSBY.

Week ending July 25th.

Alkali—
Port au Prince, 138 dms.

Chemicals *(otherwise undescribed)*
Antwerp, 8 btls.
Rotterdam, 38 dms.

Coal Products *(otherwise undes.)—*
Dieppe, 105 cks.
Esbjerg, 2
Rotterdam, 1

Colours—
Antwerp, 5 cks. 2 cs.
Dieppe, 1
Hamburg, 6
Port au Prince, 52 2 pks.
Rotterdam, 3

Dyestuffs *(otherwise undes.)—*
Dieppe, 3 cks.

Soap—
Dieppe, 17 cks.

PRICES CURRENT. WEDNESDAY, AUGUST 5TH

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities ma

	£	s.	d.
Acids :—			
Acetic, 25 % and 40 % .. .. per cwt.	5/9 & 8 9		
,, Glacial .. .. ,,	40/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¼
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4¾
,, Sulphate (grey) London .. .. .. per ton	7	17	6
,, ,, (grey) Hull .. .. ,,	7	16	3
Aniline Oil (pure) .. .. per lb.	0	0	8
Aniline Salt ,, ... ,,	0	0	7½
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 63/-		
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	0	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Kuncorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	3	9
,, 50/90 ,, ... ,,	0	2	9
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	2	2
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	11
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	5
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	48	15	0
,, Sulphate .. .. ,,	16	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	2	6
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	22	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	19	0	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magnesia .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. .. per ton	2		
Manganese, Sulphate .. .. ,,	17		
Borate .. .. per cwt.	2		
,, Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils :—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	18		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	21		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. .. nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	20		
,, ,, (Caustic Potash) 70/75 % .. ,,	19		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4		
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3		
,, ,, (Soda Crystals) .. .. .. ,, ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	4		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton	23		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4		
,, ,, 77 78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	2		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25 % .. .. ,,	5		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	8		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	6		
,, (Roll Brimstone) .. .. ,,	5		
,, Brimstone : Best Quality .. .. .. ,,	5		
Superphosphate of Lime (26% .. .. ,,	2		
Tallow .. .. ,,	18		
Tin Crystals .. .. per lb.	0		
,, English Ingots .. .. per ton	64		
Zinc (Spelter) .. .. ,,	17		
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5		

THE

CHEMICAL TRADE JOURNAL

AND

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"NITRAGIN."

THERE is a tale, well known in science circles, of the perplexed state of mind in which an old gin toper found herself after hearing a popular science temperance lecture on account of the multiplicity of "gins," or more correctly "gens," which had then for the first time been brought within her ken. But despite all the hydro, oxy, nitro, and halo "brands" she still preferred her first and long-tried acquaintance. It was without a qualifying prefix, and she liked it "without."

Professor Nobbe has now added to the list, and the title of his new product is likely to prove as confusing on paper as it is to the ears of those who are bibulously inclined.

To the scientific world, however, it is full of another and much more lasting interest. Quite recently we referred to a new scientific proposal which promised to do something substantial for agriculturists, but even that important advance is eclipsed by the results which have attended Professor Nobbe's efforts to place cultivation on a more secure basis. So far, of course, there has been little time in which to do much in the way of application to every-day requirements, but the success that has been achieved up to the present shows clearly that the right line of march has been struck, and there is every reason to hope for very useful as well as instructive developments.

It has long been known that among plants capable of absorbing nitrogen from the atmosphere some have peculiar nodules growing on their roots, and, further, that the development of these nodules is an essential to successful cultivation. Subsequently it was found that these nodules contained specific micro-organisms or bacteria. Further experiments in sterile sand revealed the fact that watering with the aqueous extract of a fertile soil produced the growth of the nodules in certain instances. In other cases this treatment was not enough. With lupins, for example, it was necessary to use the extract from the very soil in which the particular crop being experimented on had been growing well.

The immediate effect of this knowledge was a number of experiments on the inoculation of soils, but though these were, as a whole, successful, it was like working in the dark. Professor Nobbe approached the problem which was thus presented for solution from the other side. He set himself to eliminate the specific organisms peculiar to the nodules on each plant, and obtain them as pure cultures with a view to identification. Soil inoculation as then practised, by the transference of a few loads of the desired soil from one field to another, was not only tiresome and uncertain, but it was equally possible to import fungoid diseases and parasitic growths detrimental to the development of the plant. By means of direct inoculation with a pure culture all this would be avoided.

The result was, strictly speaking, partly successful and partly negative, but practically speaking it was wholly successful, though in a way somewhat different to that expected.

When the pure cultures of certain leguminous plants had been obtained the organisms might truly be said to have been isolated, but they could not be permanently distinguished. No special characteristics could be discovered to enable the culture from the nodules of peas, clover, and lucerne, to be recognised one from the other by microscopical examination. As far as individual recognition was concerned, therefore, the progress made was *nil*; but, on the other hand, that far more practical point—the value of direct instead of indiscriminate inoculation—was most decisively settled. Professor Nobbe clearly showed that while in appearance the same, the different cultivations acted in a characteristic fashion. The pea cultivation acted well for inoculating the pea plant, but not for clover, robina, etc. In short, each culture was potent in its own sphere, and, except in the case of one or two closely-related orders, in no other. He thus established the fact that every leguminous plant has its own particular bacterial growth and by direct inoculation, the fertility of individual crops is assured, other things being equal.

The name, though somewhat easy to confuse with nitrogen, is based on the Greek verb "agein," to make active, and is, therefore, quite justifiable.

So far about twenty pure cultures have been prepared and successful agricultural trials made. These cultivations cover the principal members of the clover, pea, vetch, and lupin families.

Their preparation has been placed on a commercial footing, Messrs. Meister, Lucius and Brüning, of Höchst-a/Maine, having laid themselves out specially for the large scale production of the pure cultures that have been obtained. Supplies are therefore now available for experimental trials, the cost of a bottle sufficient for inoculating half-an-acre being about half-a-crown.

If not generally used, there is still a promising outlook for nitragin as a medicine, so to speak, as everything points to this new and direct method of inoculating soils proving a preventive of clover sickness. It will also probably overcome the difficulty found in growing white and red clover and alsike on the same ground for more than two years in succession.

All things considered, it will not be surprising if much more is heard of this new departure and its applications in the near future, which will also mean the opening up of a new quasi-chemical industry, the limits of which, though prescribed for the while, are capable of considerable extension.

THE "CUMMER" DRYERS.—Messrs. Charles Erith and Co., heating, ventilating, and drying engineers, of 70, Gracechurch-street, London, advise us that they have sold one of the largest Cummer drying machines (at £2,050.) to the Hull Fish Manure and Oil Co., Ltd., of Hull, for drying their fish offal. This machine revolutionises the cost of production, as one dryer does more work than the six dryers hitherto used by this company, at less than one-fourth the cost of fuel; while, the operation being continuous and mechanical, nearly all labour is dispensed with, and, in addition, a better quality of product is attained. When Messrs. Erith and Co. placed their proposals before the Hull Fish Manure Co., their claims appeared so remarkable that a point was made of investigating the facts very closely; and, in order to make accurate tests with their own material, the Hull Company sent their engineer and manager to an American Fish Manure Works using the Cummer dryer, by whose courtesy they were able to satisfy themselves on every point as to the accuracy of the representations. These gentlemen also visited Cummer dryers at work on a great variety of other materials, including garbage, animal tankage, sand, clay, bricks, etc., and in reporting on their investigations they stated that the Cummer dryers exceeded their most sanguine expectations, both as regards economy, capacity, and quality of work done, and recommended their company to buy the largest sized dryer, as has now been done.

Reports of Companies.

ELECTRIC CONSTRUCTION COMPANY, LTD.

The report of the directors states that the net profit of the past after paying interest and general expenses providing for the full tenance of buildings and plant, and appropriating £5,000. to dep tion account, is £16,450. Adding to this amount the credit bala £10,134. from last year, the sum available for dividend is £2 whereof the directors recommend that £2,288. be applied in pa of the dividend on the preference shares on September 1st nex £11,000. in payment of a divdend of 5 per cent. (free of incom on the ordinary shares, one half on September 1st next and the half on March 1st, 1897, and that the balance, £13,297., be forward to the credit of next year. The gross manufacturing pro increased from £31,814. in 1895 to £41,353. in 1896. The outp the works shows a considerable increase on that of the previous and the company's high reputation for excellence in design and of workmanship has been fully maintained. The factories are n of orders at fairly remunerative prices. To meet the demands growing business a considerable addition has been made t buildings and plant at Bushbury, and these extensions, recently pleted, will not only facilitate prompt execution of orders, but als to economy in production. Among the more important works pleted during the year, or now in progress, may be mentioned from the War Office and Crown agents for the Colonies and pl various central stations, including Shoreditch, Clerkenwell, L Durban, and the Hartlepools Electric Tramways.

JOSEPH ROBINSON AND CO., LTD.

The directors of this company announce that the net profits year amount to £4,330. 17s. 3d., to which is added balance b forward, £579. 10s. 9d. The sales have considerably increased the year. The St. Helens chemical trade shows an improvement the year. The loss at Whitehaven for the year was £883. 8 The London business continues to steadily develop, and the prod the company have proved entirely satisfactory to the Admiralty provincial users. The large deposits of gypsum at Knothill are rate quality, there being now 9,850 tons uncovered. Deducti *interim* dividend of 5% paid in December, amounting to £ writing off the loss at Whitehaven and also £500. for depre there remains a sum of £2,785. 8s. to deal with. The directors mend a further dividend for the past half year at the rate of annum, absorbing £1,950., making the total dividend for the yea —leaving a balance of £835 8s to carry forward.

WESTFIELD PAPER CO., LTD.

The first annual general meeting of this company was h Edinburgh this week, Mr. Charles Chalmers, chairman, pre The report by the directors showed that the profits realised £1,590. more than anticipated, and the balance at the credit profit and loss account was £6,360. A dividend of 5% on pref shares and of 10% on ordinary shares was recommended, al £2,000 be carried to the reserve fund, and £337. be expend writing off half of the preliminary expenses, leaving a balance of to be carried forward. On the motion of the Chairman, recond Mr. W. C. Johnston, W.S., the report was adopted.

DIVIDENDS.

BRUNNER, MOND, AND CO., LTD.

The directors have declared a dividend on the ordinary sh 30%. The profits on the half year were £180,000., which is crease of £18,000 on the previous half year. £18,600 is to be reserve. Nearly 8 000 7% £10. preference shares are to be iss present ho'ders at a premium of £7. per share. The total amo the dividend now declared is £160,000.

TROTTER AND SON, LTD.

The ninth annual meeting of the shareholders of Trotter & Son, Li papermakers, was held in their offices at Chirnside Bridge, this Mr. W. Jacks, D.L., Glasgow, chairman, presiding. The repo the directors was approved, and a dividend at the rate of 10 clared. Mr. Jacks and Colonel Milne Home, retiring directors, re-elected.

ROSARIO NITRATE CO., LTD.

The directors have declared an *interim* dividend of 3% on accou the year ending 30th September.

ANOTHER DANGEROUS TRADE.—According to the *London Ga* the Home Secretary has certified that the process of sorting goat-hair, or camel-hair, and the processes incidental thereto dangerous or injurious to health.

The Patent List.

his list is compiled from Official sources in the Manchester mical Laboratory, under the immediate supervision of ge E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

borating Apparatus. R. H. F. Finlay. 16,552. July 27.

rovements in Cottonseed Treating Machinery. J. E. L. Barnes. 6,587. July 27.

ting Complex Sulphide Ores. F. Ellershausen. 16,604. July 27.

acting Zinc and other Metals from their Sulphur Compounds. . W. Golby. 16,698. July 28.

ring Water. G. H. Sellers. 16,714. July 28.

itic Soda and other Alkaline Hydrates by Electrolysis. L. G. ttenborough and E. A. Sulman. 16,729. July 28.

ovements in the Manufacture of Soap. W. F. Haywood. 16,746. uly 28.

ovements in Tanning. J. Blunck. 16,764. July 28.

acting Fats, Resins, and Sulphur Colours, etc., with Volatile olvents. J. Merz. 16,766. July 28.

ovements in Bleaching Apparatus. J. Lees and H. Arnold. 16,786. uly 29.

ying Acetylene and Apparatus therefor. R. L. Pictet. 16,843. July 29.

ufacture of Acetylene and Apparatus therefor. R. L. Pictet. 16,844 uly 29.

ovements in Electrolysis. G. Poore. 16,852. July 29.

teless Explosives. H. Maxim. 16,858. July 29.

easing the Chemical Stability of Nitro-compounds. H. Maxim. 6,859. July 29.

or Tank for Distilling, Boiling, or Holding Acids, Alka ies, and ther Corrosive Liquids. D. Bray. 16,877. July 30.

en and Hydrogen from Steam by Electrolysis. E. Strzelecky 6,916. July 30.

ufacture of Liquid Chlorine and Apparatus therefor. H. Kunheim. 6,944. July 30.

oving Gaseous Iron Compounds from Water Gas. H. Strache. 6,984. July 31.

ge Filters. J. B. Petrie. 16,994. July 31.

rolytic Manufacture of Cyanide of Alkali. R. Pauli 17,001. July 31.

ess of Making Nitrates. J. B. Kasten. 17,009. July 31.

Pigments. A. M. Clark. 17,031. July 31.

ring Ammonic Silicofluoride. W. Mills. 17,055. August 1.

Colouring Matters. I. Levinstein and Levinstein, Ltd. 17,064. Aug. 1.

Colouring Matters. I. Levinstein and Levinstein, Ltd. 17,065 Aug. 1

ovements in Lubricants F. W. Klever. 17,118. August 1.

aration and Purification of Copper Solutions. J. C. Graham. 17,127. ugust 1.

STRACTS OF LATEST COMPLETE SPECIFICATIONS.

ese abstracts are specially prepared for the Chemical Trade Journal, ALL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the* .

od of and Apparatus for Washing and Compressing Sulphurous cid and other Gases or Fumes E. Porak, Kienberg, Bohemia. Eng. at. 12,643. June 9, 1896.

e chief object is to avoid the use of air pumps or compressors, , besides being expensive, tend to form sulphuric acid. A water therefore used, which sucks the sulphur dioxide or other gases the supply flue, and discharges into a closed reservoir, whereby as is washed and also compressed. Finally the gas is led off the top of the reservoir to its place of destination. A centrifugal ier pump keeps drawing the water from the reservoir, and raising eed the jet. There are three figures.

Manufacture of Ammonium Carbonate and Acid Ammonium arbonate from Certain Waste or Bye-products, and Apparatus for ie in such manufacture. H. R. Lewis, 7, Drapers'-gardens, London. g. Pat 14,618. August 1, 1895.

e main purpose is to utilize the carbon dioxide from cement and kilns, to which end the gases are combined with those given off in listillation of gas liquor to form carbonate, bicarbonate, and mate of ammonia, or a mixture of these The main flue is so d that the gases can be drawn off from any one or series of kilns. gases are washed and cooled by passing through the gas liquor to stilled, thereby warming up the liquor at the same time. A uous still is used, which prevents the formation of a non- llizable solution of ammonium carbonate as a distillate, and by aiing the regulation of the heat enables the impurities in the to be kept back The washed kiln and still gases are passed depositing chambers, where the crystalline salts form. After g the condensing chambers, the gases are passed through a scrubber to catch the last traces of ammonia. The salts are ed by exposing to a current of air, when ammonium sulphide is d off and caught in dilute sulphuric acid, or else they are washed a small quantity of water, filtered and dried, the wash liquor going to the stills. By the latter method, besides purifying the salts, all the carbamate is converted into carbonate. The conversion into the acid salt is a very simple matter. In the need of additional purity sublimation is suggested, either for use alone or as a subsequent treatment.

Improvements in the Manufacture of Soaps and Saponaceous Compounds. J. Ascough, Handsworth, Staffordshire. Eng. Pat. 10,681. May 18, 1896.

The use of boron in various forms constitutes the leading feature of this invention, and more particularly, it should be added, the state in which it is incorporated with the soap By using the boron compounds in a hot and fluid, or semi-fluid, state, their subsequent dissociation from the finished soap when exposed to damp is avoided. For general hard soaps and powders the following mixture is melted down: — Powdered boracic acid, 62lbs.; dry sodium carbonate, 27lbs; boiling water, 44lbs; finely-powdered tincal borate, 3lbs. When thoroughly melted and stirred till effervescence has nearly ceased, two pounds of this mixture is added to every hundredweight of separately prepared boiling soap For powders the mixture is allowed to cool somewhat, but while warm is incorporated during the grinding and mixing process. Of course for the dry carbonate and water an equivalent of soda crystals can be substituted. For polishing soaps the boron compound mixture is composed of: Soda crystals, 71lbs; finely-powdered boracic acid, 50lbs.; and calcium borate, also thoroughly powdered, 16lbs

Improvements in Horizontal Coke Ovens A. Hüssener, Essen a/ Ruhr, Prussia. Eng. Pat. 6,999. March 31, 1896.

The improvements have reference to the method of heating the coking chambers, and it is claimed that under the system set forth coals can be coked which hitherto have had to be avoided on account of their yielding either too large or too small a volume of gas Instead of only one oven channel below each oven chamber receiving the gases at two sides, there are two completely independent channels below each oven chamber, which are heated separately and connected with a system of horizontal channels in the divisional walls. There are 12 figures, which should be consulted for details.

Improvements in the Preparation or Manufacture of Formates and Nitrites. Dr. M. Goldschmidt, No. 1, Carme-strasse, Charlottenburg, Germany. Eng Pat. 17,066. September 12, 1895.

The reaction between carbon monoxide and soda lime at a temperature of about 230°C. resulting in the production of sodium formate is made applicable on the manufacturing scale by subjecting the soda lime to the action of the gas under pressure. In this way the yield is improved and the process rendered practicable owing to the comparatively low temperature at which this method enables the reaction to be performed.

The formate is subsequently used for the preparation of nitrite by fusing with a nitrate. There is no rush of gas or explosion, but the nitrate is readily converted even at a comparatively low temperature, and particularly in the presence of a free base or alkali.

The separation of the nitrite is easily effected by crystallisation; or the solution of the product of the fusion, which contains $NaNO_2$ and Na_2CO_3, can be causticised and concentrated, when the nitrite readily separates in the solid form. A method for using carbon monoxide, a base and a nitrate direct is given, the formate being formed *in situ*. Particular instructions are added in this case for obtaining a good absorption of the monoxide.

EXPLOSION ON A PETROLEUM AND BENZOLINE BARQUE.—At Liverpool last week an explosion of vapour occurred on board the iron barque *Rentenbeck* belonging to Messrs J. Davidson and Son, Whitehaven. It appears that the vessel arrived at Liverpool with a cargo of benzoline in casks, including also a few hundred casks of refined petroleum. She discharged at the north side of the West Float, the quay usually used for this purpose, and subsequently was moved from this berth across the dock to the coal tip to take in sufficient coal for stiffening purposes prior to going into graving dock. The second mate, Mr. Miller, who was in charge of the ship in the captain's absence, sent a man named Alexander Blond, aged 32, a creole, and a native of New Orleans, below to the pump well to attach a short piece of hose to the pipe in order to get the bilges pumped dry, at the same time warning him about lights, although the vessel had previously been certified as free from explosive vapour by a Board of Trade inspector. The second mate went to his room for some purpose, leaving the man to execute his order, and two or three minutes afterwards he was startled by the noise of a violent explosion Rushing on deck he saw flames and smoke issuing from the main hatch and ventilator abaft the mainmast. He immediately called ashore for help, reporting the fire on board, and the fire station was telephoned to at once The fire was soon extinguished when the brigade got to work, and the pump well was broken open and the remains of the unfortunate seaman recovered. The body was fearfully mutilated and charred beyond recognition.

Legal Intelligence.

LIVERPOOL ASSIZES.

(Before Mr. Commissioner Dugdale, Q.C., and a Special Jury.)

BATEMAN *v.* LEVER BROS, LTD.

In this action James Thomas Bateman, an engineer, sued Messrs. Lever Brothers, soap manufacturers, of Bebbington, near Liverpool, for damages for wrongful dismissal from his employment and for work done, £500. being claimed in regard to the dismissal and £1,200. for the work said to have been carried out. Mr. Bigham, Q.C., M.P., and Mr. Horridge were counsel for the plaintiff, and Mr. J. Walton, Q.C, and Mr. Mellor for the defendants.—Mr. Bigham, in his opening, claimed that in consequence of a large increase in the output of goods at the works of the defendants, buildings of an exceptional character were designed by plaintiff under circumstances that entitled him to a substantial payment as extra remuneration beyond the salary that he was receiving, which was comparatively small. The questions for the jury were—(1) Was the plaintiff wrongfully dismissed, and, if so, what compensation should he receive; and (2) did he render exceptional services outside of his contract of employment, and, if so, was he entitled to be paid, and what amount was he entitled to be paid? A third question would be whether the plaintiff was employed to act as an architect for new constructional works, or merely as a superintendent engineer. Counsel added that after an interview between the parties, Mr. Lever sent the plaintiff a cheque for £25 instead of notice, and the plaintiff was obliged to go. Was that, counsel asked, a reasonable sum to give for the purpose of terminating their service? The plaintiff was receiving £300. a year, and what was offered him in lieu of notice was practically a month's wages, whereas he was entitled to six months' notice if not twelve.—For the defence Mr. Walton submitted that the work was clearly within the scope of the employment of the plaintiff. Was there anything at all to show that Messrs. Lever Brothers were ever to suppose that they were to pay this sum of £1,200 odd for extra work? It would be a most dangerous precedent to say that employers should be called upon to pay large claims under such circumstances.—The jury returned a verdict for the plaintiff, awarding him £500, and judgment was given accordingly.

IMPORTANT NEW COAL BED.

IT seems that the management of the Denaby and Cadeby Main Collieries of Doncaster have at last succeeded in triumphing over the peculiar natural obstacles presented below the surface at their new colliery at Cadeby, and have reached an exceedingly fine bed of the Barnsley seam, some seven hundred yards from the bottom of their shaft. When the shaft was sunk, some three or four years ago, it was found to have been carried into the great Don fault, running between Denaby and Cadeby, the extent of which had not then been proved, and the existence of which, so far east as Denaby, was not expected. After the enormous difficulties which had been encountered in sinking the shaft owing to water and other matters, this was of course a severe disappointment to the company. However, about eighteen months ago it was determined to run a drift through the fault in search of the Barnsley seam, which disappeared in the throw at that point. The drift was commenced in a north-westerly direction, with a gradient of one in six, until about 200 yards from the shaft, and at an elevation of 65 yards above the Barnsley bed on the Denaby side, the Swallow Wood bed of coal was discovered. From here a branch drift in a more northerly direction was commenced, the gradient being increased to one in two and a half, and on July 29 last the workmen engaged in the drift came through the fault, upon a good bed of clean coal and full thickness, about 9 feet 6 inches, and lying fully 121 yards above the Denaby bed of the Barnsley seam. It is proposed to work this immediately by means of the branch drift, but in the meantime the original drift, at a gradient of one in six, will be carried forward until it reaches the coal. Mr. W. H Chambers, the manager of the company, anticipates that all the coal required can be brought to the pit bottom by means of the steeper gradient, until the easier gradient is available. In the course of a week or two the hydraulic machinery on the surface and below will be completed, and Cadeby Main Colliery will then be in a fair way to become the greatest colliery undertaking in Yorkshire. The development of the colliery will be pushed forward, and when the second drift is completed Mr. Chambers is sanguine that a record output will be secured. The company are making extensive arrangements on the surface to cope with the requirements, and have recently completed arrangements for the acquisition of additional land on which to erect a further row of coke ovens. There is already nearly a quarter of a mile of coke furnaces, of the beehive pattern, which yield 60% of coke, for which the company finds a ready market.

THE JAPANESE PETROLEUM MARKE

THE island of Sumatra may, within the next five years, sup United States as Japan's source of supply for kerosene that means to America can be inferred from the fact that Japan, according to the United States Minister in Tokio, about 30,000,000 gallons of oil from America. Dr. Muir, a four years ago, established an oil refinery for a big Dutch com recently discovered oil fields in the far interior of Sumatra. S time he has been constantly employed managing the refi perfecting the plant. He has now orders to begin the constr two more refineries, so extensive is the business becoming. region is on the bank of a navigable river, and practically in t of the jungle. The Dutch own the island and control t refineries, and all business connected with their developme Muir is the only American among fifteen Dutchmen who ha of a colony of nearly 5,000 natives and half-castes, who are about the various departments of the business, which incl factory, box factory, saw mill, and other industries. British an steamers come up the river and load the cases of oil right at the They carry them to Singapore, Pekin, Yokohama, and several E ports. Twelve wells are in operation in the one district, average daily output is from 200 to 300 barrels each So far oil districts have been discovered, for no prospecting has b The Dutch will not allow Americans or other foreigners to e their territory. It is believed that other rich fields await dev and efforts will be made to find them. Mr. Muir declared em that in five years from now no petroleum would be shipped United States to Japan He refused to say what the quali Sumatra oil is, but reiterated his assertion in regard to the ports from this country to Japan. One of the principal rea Nemoto, the Japanese Commissioner of Commerce, stated day, in favour of San Diego as a terminus for one of the new steamship lines, was that it would be a more convenient port to load kerosene, raw cotton, and machinery for the Japanese "for," he said, "our country imports great quantities of kero America."

THE ALGERIAN PHOSPHATE DISPUT

SIR Lambert Playfair, in his last report on Algeria, ref recent attacks in the French Senate and Press on th phosphate owners at Tebessa (C.T.J. 445 and 447). Sir reported some time ago on a visit which he made to the phospha at Tebessa belonging to Mr. Crookston, and described the w which the latter had, by his intelligence and practical go turned to his own profit and to the benefit of the colony a industry which had been entirely discredited by the failure who had previously risked their capital in it An English taken over a concession made to a Frenchman, M. Wéb Souk Abras; he lost £48,000. in the speculation; a French even more in attempting to work the deposits in the vall Chéliff; so when M Chapelle discovered the deposits at Te could find none of his countrymen, either in Algeria or in disposed to engage in what was then considered a most risk tion. He finally addressed himself to Mr. Crookston, of B this gentleman became associated with the enterprise I giving Mr. Crookston the credit due to him for having so su developed this important industry, the Press, both in Alg France, broke out into a fury of invective for the way in w mineral wealth of Algeria was being squandered for the Englishmen. There was a general demand that something done to preserve this valuable produce for the benefit of the and that export duties should be imposed on all mineral shipp English to foreign countries. A violent attack was made in th Senate by M. Pauliat. "Do not forget," said he, "that the who work these deposits make a profit of 10f. to 15f. a ton; therefore, an extraction of from 15,000,000 to 20,000,000 tons during centuries to come." The fact is, says the Consul that the concession was only granted for 18 yea that there was no possibility of Mr. Crookston extracti than 60,000 tons per annum under the most favourable circu The alleged profit of from 12f. to 15f. per ton should in reali 70c per ton. The actual cost of extraction, transport, shipping mineral averaging 60% of phosphoric acid is 34f. 30c, and the pric April, 1895, did not exceed 36f. per ton for second quality Si the prices have fallen still further, with the result that a restriction in the shipments of phosphates from Bône has take as only the highest quality can now be profitably worked, th qualities, for the present at least, being abandoned. The to duction towards the close of 1895 had reached 600 tons daily

iow fallen to 300 tons per day, and a still further reduction is to ıred unless the Government intervenes in order to reduce the nt rate of railway charge, so as to enable the exploiters to compete ore favourable conditions with the American mines than they do esent. Of the three companies actually engaged in phosphate g in the Tebessa district, the Société Française had completely nded operations, the Constantine Company of Leith has reduced tput to 100 tons per diem, while the Crookston have reduced their ıction to 200 tons. As the last firm hold very large stocks of hate at Bône, a still further reduction of their output is con- ated. "Thus it is seen to what insignificant proportions this ous natural treasure is now reduced, and how exaggerated have the expectations regarding it. It cannot be doubted that this try, once so promising, has been shrivelled up, mainly owing to olitical campaign that was directed against it, and to the subse- action and interference of the State, which, one would think, he greatest interest in seeing it develop and flourish. It is a of what requires no proof, of the wisdom of leaving unfettered lirected private enterprise, and of the advisability of the State intervening to foster and encourage it."

FIRE AT AN OIL REFINERY.

FIRE which assumed very destructive proportions occurred this week at the premises of Messrs. W. A. Rose and Co., Millwall, E.C. The ises are situated on Rose's Wharf, and consisted of an extensive ure of six floors, 60 feet long and nearly 60 feet wide. This sed as a refinery, &c., and at the time of the outbreak was filled with various stages of manufacture. Close by were other buildings as crushing mills, stores, boiler-houses, &c., while lying alongside harf were barges loaded with tar, oil, and coals. It was in the e of this great mass of inflammable material that the flames first ıred. At about a quarter past seven o'clock dense volumes of e began to pour out of the upper windows of the main factory, and were soon afterwards followed by immense tongues of flame. Fire es rapidly commenced to gather at the spot from the East-end stations, ling those from the Bishopsgate, Bow, Hackney, Bethnal-green, Mile- Shoreditch, and Whitechapel stations. Superintendent G. Smith, he arrived from the district headquarters at Commercial-road found a task of exceptional difficulty awaiting the members of the de. The fire was obviously burning downwards, and the three loors were completely involved before the deliveries from a ınt could be got to work. The appliances at first employed ıred to have not the slightest effect. It was decided to summon ge force to the scene, and while the nearest river floats were at telephoned for, so that the fire might be fought with from the side, Mr. Gamble, the present second officer of the brigade, was ned without delay of the alarming character of the fire, and lost time in sending on steamers from other districts London. Mr. Gamble proceeded from Winchester-house. ıwark-bridge-road, in a hose van which carried 1,000ft. pare hose in view of emergencies, and at the same steamers were being rapidly taken to the scene from Tooley- , Old Kent-road, Rotherhithe, Camberwell, and other parts of lon. By eight o'clock, however, a fire of enormous proportions blazing and was fairly baffling the firemen. The entire warehouse ı mass of fire from top to bottom, and it was almost impossible to within 20 yards of the place by reason of the extreme heat. e were repeated explosions, and the upper floors and roof crashed d caused the immense body of fire to rise to a great height. The ng oil was running out upon the wharf, and the barge *Perseverance*, h was lying at the wharf loaded up with barrels of tar, caught and was soon burning furiously from end to end. The firemen ed with the utmost energy, and with two floats from the river side nany steamers on the landside threw thousands of gallons of water e flames; but presently the barge *Raven*, loaded with oil, also me thoroughly alight, and the flames blazed across in the course of minutes to the barge *Igene*, which was loaded with coal, and was also ablaze. For a time it seemed probable that the property of Union Wharves Company, close by, would be attacked, but this happily prevented. The London Salvage Corps, under Captain rendered excellent service in preventing damage by water and kage to adjoining property. Eventually the main warehouse fell th a crash, the barge *Perseverance* sank, and the other two were ically burnt out, so that by about ten o'clock Mr Gamble was able rculate the official "stop" message. A body of firemen, how- had to remain all day, throwing water on the smouldering ruins, at night relief bodies of men were ordered on to the scene. In of the many falls of brickwork, &c., which took place during the ress of the fire, the members of the brigade escaped without y, though the faces of some of the men were scorched by the endous heat.

Parliamentary Jottings.

CONCILIATION IN TRADE DISPUTES BILL.

In the House of Lords last week, the Earl of Dudley, on the order for the committee on this Bill, spoke of the great loss to the country arising from trade disputes. The evil was a serious one, and sufficient to justify this Bill. The Government had adopted the principle of conciliation in the Bill, because all experience showed that drastic and coercive means of preventing or putting an end to strikes had been a failure. Much good work had been done by voluntary boards of conciliation, and the Bill followed the voluntary principle. It was proposed to add to the importance of the voluntary conciliation boards by giving them registration; and the Board of Trade were to be empowered to encourage the formation of such boards, and to try to put an end to disputes. The measure was a practical one, and would be of considerable value and utility.

The Bill passed through Committee without amendment.

LOCOMOTIVES ON HIGHWAYS BILL.

On Monday, on the order for the consideration of the Commons' amendments to this Bill, Lord Glenesk objected to the proposal to place a tax on these vehicles. He had intended to move that the House should disagree with this amendment, but as it was a question of taxation, and, in the interests of the Bill, he did not wish to raise a question between the two Houses, he should withdraw his amendment. The Earl of Winchilsea also protested against the tax. He moved to add words providing that the tax should not apply to vehicles used solely for agricultural purposes. Lord Harris said that it was a question whether it was in order to move an amendment on a question of taxation. The officers of the House of Commons, whose opinion he had taken, thought the amendment was not in order, and the officers of the House of Lords, while holding that technically the amendment could be moved, thought it was highly improbable that it would be accepted in another place. The Earl of Winchilsea pressed the amendment. He preferred to take the advice of the officers of the House of Lords to that of the officers of the House of Commons. The amendment was negatived.

The remainder of the Commons' amendments were agreed to.

A POWERFUL CONVEYOR SPIRALLING MACHINE.

THE New Conveyor Co., Ltd., have put down a very large and specially designed machine to coil spiral conveyors from cold steel bars any depth or thickness for conveyors from 4 inch to 4 feet diameter.

As a sample of what the machine can do, it may be pointed out that about a week ago no less than 14 large conveyors, 14 inches diameter and 8 inches pitch, for the Royal Arsenal, Woolwich, were coiled from cold steel bars 2½" by ¾" in less than two hours, the coils coming out perfectly true in diameter and pitch, and at a cost for labour of less than one farthing per foot. With the old-fashioned mandrils and smith work, these conveyor spirals could not have been made in less than a week, and at a cost of over 2s. per foot. Another order for 30-inch diameter conveyors coiled from 3½" × ¾" steel bars was put through the machine with great ease in a few minutes. The following description of this spiralling tool will show how work of this kind, although hitherto impossible, is now accomplished.

It is designed on lines similar to the well-known "three-high" roller mill, used in modern flour mills. The two bottom cast-steel rollers are fixed in a massive frame on steel shafts 6 inches diameter, and contain adjustable grooves to fit the depth and width of any size of bar to be coiled. The power is conveyed to these rollers by means of four pairs of strong gear wheels and broad-faced reversing pulleys, so that either left or right hand spirals can be made. Both of these rollers revolve in the same direction. The upper roller is fitted on an adjustable steel shaft, and is arranged on the framework of the machine so that it can be moved up or down, to suit conveyors of any diameter or pitch; and the desired diameter and pitch is produced by skew guide wheels fixed on a shaft which moves in either a horizontal or vertical direction. The cost of this conveyor-spiralling machine, with the necessary accessories, exceeded £500.

Mr. Gilbert Little wishes it to be known that he will gladly allow engineers and manufacturers wishful to see cold steel bars spiralled to any size, by machinery, to inspect this new tool at the New Conveyor Company's Works at Smethwick.

WAR BALLOONS AND EXPLOSIVES.—It is intended shortly to make some important experiments at Aldershot in dropping explosives of various kinds from balloons. The experiments will be made from differing heights and under varying circumstances. The construction of war balloons is also receiving much attention at the present time in the Aldershot ballooning establishment, where improved balloons are being made for experimental purposes.

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Correspondence.

***We do not hold ourselves responsible for the opinions expressed by our correspondents.*

BRITISH AND AMERICAN ADVERTISING.

(To the Editor of the Chemical Trade Journal)

SIR,—"Have you been studying the American trade journals closely?" is a question that has been addressed to me in one form or other *ad nauseam* during the last two or three weeks, prompted doubtless by the new Conveyor Company's latest advertisements.

Now I address you to enter my protest against the absurd notion which prevails so widely in this country that any novelty in machinery or advertising introduced by British engineers is borrowed or copied from American designs. You may take it from me that it is all the other way about. The "silly worded" advertisements in American trade papers are, with several creditable exceptions, too superficial, and the illustrations too "crack-brained" looking, for the taste of British engineers; and I have not seen in any paper—American or European—any advertisement forming such a succinct summary of specialty machinery as is embodied in my new advertisements; but I look forward to the certainty that my latest ideas of effective advertising will, like all my former ones, be extensively imitated in American and European advertisements, and copied in the most barefaced manner by a few British firms, who will receive subsequent attention from—Yours faithfully, GILBERT LITTLE.

New Conveyor Co., Birmingham, August 6th, 1896.

A LESSON FOR SULPHATE OF AMMONIA MANUFACTURERS.

(To the Editor of the Chemical Trade Journal)

SIR,—Some 16 or 18 years ago, when sulphate of ammonia sold at a very high price in relation to nitrate of soda, and when sulphate of ammonia alone was used as a manure for sugar beet, the nitrate of soda producers bethought themselves of a scheme whereby they could displace sulphate of ammonia and induce the cultivators of beet to use nitrate of soda instead. They offered a prize of £1,000. to the writer of the best essay upon the application of nitrate of soda for beet growing in substitution of sulphate of ammonia. Never was a sum so small, when compared with the object in view, more successfully invested. Every professor of chemistry—chemist or student—saw this, to him, enormous sum within his grasp, and so, with might and main, he set himself to seize it. Each rival tried to outrival the other in his praise of nitrate, and all with common consent set themselves to disparage sulphate of ammonia. Alas for the short-sightedness of mortals, only one could gain the prize, but everyone in the profession had, in his zeal, committed himself in praise of nitrate beyond recall, and no one had the courage to immediately eat his own words. So it went forth proclaimed to the beet growing world, that every chemist on the Continent had proved beyond a doubt the vast superiority of nitrate of soda over sulphate of ammonia for growing sugar beet, and under the guidance of the enlightened chemical world, what beet grower could do otherwise than follow the leading? From that day to this, step by step, nitrate of soda has encroached upon the old preserves of sulphate of ammonia, until to-day we stand in the extraordinary position of being completely routed from a field that formerly was all our own. But are the sulphate of ammonia manufacturers doing right in submitting to such an extraordinary change, and in their despair sitting with hands folded, unable to decide what course should be taken? No one has a right to ask for more than the unitary value of sulphate of ammonia as contrasted with the unitary value of nitrate of soda. In olden times it was the other way, for sulphate of ammonia brought a far higher price per unit of ammonia than nitrate of soda did; but our Nemesis has overtaken us—as it inevitably does when injustice, either intentional or accidental, has been perpetrated—and so we are passing through our days of tribulation. But now every feeling of justice recoils against the extraordinary anomaly of 19% ammonia (the percentage of nitrogen in nitrate of soda, calculated to ammonia) selling at a higher price than 24½% (the percentage of ammonia in sulphate of ammonia). Would not any man be considered a fool who, having £24 10s offered to him, preferred to take £19 instead, and believed himself to have the best of the bargain? By what name, therefore, should the consumer be called, who prefers to pay the higher price for the poorer article? Or what should we call the seller who is so foolish as to give away £24 10s instead of £19., without trying to rectify the ridiculous sacrifice? The price of nitrate of soda to-day in say £8. per ton. The price of sulphate of ammonia is to-day say £7. 12s 6d per ton. If sulphate of ammonia be based upon its value in relation to nitrate of soda then the price should be $8 \times 24\frac{1}{2} \div 19 = £10.$ 6s. 4d. per ton. Or if nitrate of soda be based upon the price of sulphate of ammonia then the price should be £7. 12s. 6d. $\times$ 19 $\div$ 24½ =£5 18s. 3d per ton. Now, what does all this mean? means this, that the nitrate of soda producers are getting £2. 1 than they should get, or that the sulphate of ammonia produc ting £2. 13s 10d. per ton less than they should get. But w mean in the aggregate? Assuming the export of nitrate of million tons per annum, then it means that the nitrate of soda are now receiving £2,087,500. per annum more than they shou A fair return for a thousand pound prize once given assuming the production of sulphate of ammonia in Gre alone, to be 180,000 tons per annum, then it m British producers are getting less by £484,500. per an they should get. A fearful loss from overlooking of a thousand pound prize!!! In the report of the annu meeting of the association of sulphate of ammonia manufact cussion took place about the desirability of offering prizes, face of results like these who can doubt the efficacy of prize his contribution for so worthy an object? One penny per to production of sulphate of ammonia in Great Britain of 18 will yield £750., twopence £1,500. All the gold fields of So are not in it as an investment if results like the above can about.

Years have now elapsed since these essays were writt of the writers have passed away beyond the need, or power, tion. What those who are living have said may now be forg a fresh generation of chemists have arisen, who for a thousa are willing to write for all they are worth in praise of this (f sent) despised article. This they may do without imperi souls, as so many did on the former occasion, for by all the in the world 19 cannot be made equal to 24½, nor can anyo the unit of ammonia in sulphate of ammonia is only wo while in nitrate of soda it is worth 8s. 5d., and in dried 7s. 9d.—I am, &c., Ni

THE EXAMINATION OF SUINT.

ALTHOUGH a great many methods of examining suint taining its composition for commercial purposes have gested, the majority have generally proved very difficult practically owing to their complicated nature and the varia results obtained. M W. Herbig seems, however, to have method of estimating the unsaponifiable matters in suint wh reasonably simple and accurate. In outline the process cons estimating the free and combined alcohols. Saponificati pressure is then resorted to, and the fatty acids precipitated of calcium and the precipitate finally extracted with acetone.

Such is the process in general, while the details are as From 1 to 2 5 grams of suint are boiled with semi-normal potash to obtain a thorough saponification. Neutralise the alkali with acid and wash the whole into a flask with bo Allow most of the alcohol to evaporate, and then precipitat acids with calcium chloride at 70° to 75°C. Filter the p wash with dilute alcohol (1:20), and air dry on a filter

M. Herbig has established by experiment that the calciu the fatty acids are practically insoluble in acetone. The dry p is therefore extracted in a Soxhlet tube for six hours with fi tilled acetone. The exhausted residue is removed to a platin and the acetone gently evaporated away, the adhering porti washed with ether into the platinum basin and the ether a evaporate. The residue, which now represents the unsa portion of the suint, is dried at 105° and weighed.

Special attention must be paid to the purity of the aceto should have a boiling point of 55·5° to 56·5°C and also to perature at which the fatty acids are precipitated with th chloride.

The following results are useful for the purposes of comp well as representative of the accuracy of the process. In eac results are the average of five determinations. The figures percentages of unsaponifiable matter in the various suints:—

South American	48·31%	to	48·5
New Zealand	46·17%	,,	46·4
Russian	37·07%	,,	37·2

COAL AT RAINFORD.—As the result of operations exten more than two years, the Rainford Coal Company, Limit succeeded in proving the well-known Arley mine at the Colliery in an area where it has hitherto been unworked. has been found of excellent quality, and the extent of the ne such as to ensure an output for many years to come. The op of this new area is being rapidly proceeded with, and it is that in a short time employment will be found for a con number of colliers. This, in conjunction with the new ho which were started by this company last summer, should be advantage to the district of Rainford.

Paper-Makers' Column.

PUNCTURES OR SMALL HOLES IN PAPER.

UNCTURES or small holes in paper are produced by small grains of mineral substances, such as sand, which, by the great pressure ng glazing, are pressed through the sheet of paper, and then fall In machine and unglazed papers these imperfections are not so y discovered with the naked eye, especially if the paper is bright in ur.

hese holes may occur at regular intervals in the web of paper. t likely this is caused by hard grains of sand becoming imbedded ie elastic covering of the paper—or cotton—rolls, and at each lution the protruding end of the particle of sand pierces the web aper as it passes.

further cause for the appearance of double punctures is probably g to the weaker pressure of the topmost roll splitting the grains of into two or three fragments, which distribute themselves over the ce of the paper, each particle making a small hole.

ie paper rolls of the calenders may also be prepared from paper e from incompletely-washed pulp, which contains sand and par- s of metal, and which, under continual use, gradually work them- s to the surface and perforate the paper till finally they fall out.

esin spots appear dark upon the surface of the sheet of paper, but towards the light they are transparent, like oil spots, although n in colour. Fine holes are seldom formed by particles of free ; they can usually be traced to particles of hard solid matters ed up from the floors or left in the stuff.

ravelling backwards in the manufacture, there is no doubt much and sand are conveyed to the calenders by the reels of paper being ed to lie on dirty floors. The particles of sand readily adhere to lamped paper, and if fine are either pressed into the paper or cling ie surface of the rolls during the process of calendering, causing an mulation of dirt on the latter which must be washed off periodically. n the other hand, the grains of sand are large their action is as e described.

it perhaps the most important source of sand particles in the paper be found in the insufficient length of the sand trap or in the china The length or size of sand trap is not so easily determined pting by experience, but a careful examination of the deposits in arious parts of it should be some guide as to its working capacity. particles of sand or grit should be found at the end of the trap e the stuff flows from it to the strainers.

rticles of sand existing in the china clay and other loadings can y occur. The loadings should therefore be subjected to a rigid ication before they are added to the stuff in the engine. The tice of boiling the clay up with starch gives the sand a chance to in suspended if no means are exercised to previously remove it the clay. A purification of the clay, coupled with a judicious tion of the clay itself when purchasing, will remove most of the rities. This purification should consist of a thorough mixing of lay with sufficient water to form a thin cream, boiling if deemed ssary, settling for one or two hours, and passing all the "clay m" above six inches from the bottom of the mixing tank through ve into another tank placed below it. In this bottom tank the h should then be added After the mixture has been thoroughly d it is ready for the beating engines.

actical men well know that the best way to avoid imperfections in r is to pay particular attention to the ingredients of which the r is composed. If these ingredients are likely to contain grit or they should be specially prepared, and care should be taken by nachine man that the apparatus under his control is kept clean.

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bituary.—We regret to announce the death of *Mr. Alexander ker*, managing partner of the Irvine Chemical Company, who, a few weeks' illness, has succumbed to an internal malady. Walker came to Irvine about 18 years ago as manager of large cs in the alkali trade, now the property of the United Alkali pany, and a few years ago founded the works of which he was the . Mr. Walker was a Justice of the Peace, and did his full share ork on the local bench.

OLD PRODUCTION IN THE RAND: RECORD RETURN.—The out- from the Rand district during the past month, as cabled by the Witwatersrand Chamber of Mines, amounts to 168,521 oz. This total, ever, is exclusive of the returns of several companies which, under itle of the "Association of Mines of the South African Republic," their joint output as 35,352 oz. The month's production is, there- 203,873 oz., and shows an increase of 10,233 oz. as compared the previous total, and an increase of 4,420 oz. as compared with corresponding month of 1895. This total is the largest ever hed, and exceeds the former record achieved in August of last year 00 oz.

Trade Notes.

PERSONAL.—*Dr J Lewkowitsch*, of Manchester and London, has been appointed examiner in fats and oils (including candle manufacture) to the City and Guilds of London Institute, in place of Mr. Leopold Field.

NITRATE STATISTICS.—The Permanent Nitrate Committee, in their statistical circular for August, state that the total exports of nitrate of soda to Europe for July were 1,714,000 quintals; loading for Europe, August 1, 1,909,000 quintals; imports, Europe, July, 102,980 tons; deliveries, Europe, July, 58,415 tons; visible supply, Europe, August 1, stocks and afloat, 395,125 tons.

SINGULAR PETROLEUM ACCIDENT.—At Swansea, last week, while the crew of the steamship *Rothesay* were forcing petroleum oil down a pipe into the stock room, where the third engineer, named Lace, was working in connection with the filling of the oil tanks, a sheet of flame shot up, and before Lace could be rescued he was burnt to a cinder. It is believed the accident was caused by a naked light coming in contact with vapour from the oil

THE SHEFFIELD PURE ICE COMPANY'S STORAGE PLANT.—In our description of this plant last week we mentioned that charcoal was used for lagging the refrigerators It is hardly necessary to explain that the walls of the cold storage chambers were also packed with charcoal, but it may be mentioned that all the charcoal used was the flake charcoal of the Cartvale Chemical Co., which, this company informs us, they supplied throughout.

MERSEY SALT SHIPMENTS.—Mr. H. E. Falk reports that the shipments of salt from the Mersey for July represent a fair monthly average, though there has been a considerable falling-off in the exports. Decreases are shown to British North America, West Indies, Central and South America, and Asia, whilst an increased quantity was sent to the United States, Africa, Australasia, and Pacific Islands, "rest of Europe," and United Kingdom. The total shipments during July were 74,715 tons, compared with 76,170 tons in July, 1895 Of this amount 48,052 tons were shipped from Liverpool (compared with 50,812 tons in July, 1895), and 26,663 tons from Runcorn and Weston (compared with 25,358 tons in July, 1895). Shipments for the previous six months show a falling-off in nearly every case, the total being 290 541 tons, compared with 341,602 tons in the first six months of 1895.

THE TEES AND THE PETROLEUM TRADE.—At the monthly meeting of the Tees Conservancy Commission, held at Stockton, the Chairman (Sir Joseph Pease, M P) said new bye-laws had been submitted to the Board of Trade with the object of providing better facilities and safer conditions for the carrying on of the petroleum trade. Some of the frontagers on the river, alarmed as to the character of the trade—rather unnecessarily, it was thought—had memorialised the Board of Trade against the bye-laws, and it now rested with the Board of Trade to approve of them or to make such alterations as they were advised to make the trade a safe one for the port. The chairman further noted with satisfaction that out of the recent issue of £525,000 3 per cent. stock only £10,463 had not been allotted to investors. The stock now stood at £106., and in all probability before the end of the financial year all the stock would be allotted.

SCIENCE RESEARCH SCHOLARSHIPS.—Her Majesty's Commissioners for the Exhibition of 1851 have made the following appointments to Science Research Scholarships for the year 1896 on the recommendation of the authorities of the respective universities and colleges The scholarships are of the value of £150. a year, and are ordinarily tenable for two years (subject to a satisfactory report at the end of the first year) in any university at home and abroad or in some other institution approved of by the Commissioners. The scholars are to devote themselves exclusively to study and research in some branch of science, the extension of which is important to the industries of the country. A limited number of the scholarships are renewed for a third year where it appears that the renewal is likely to result directly in work of scientific importance:—(1) University of Glasgow, William Craig Henderson, M A., B.Sc.; (2) University of Aberdeen, Alexander Ogg, M.A., B Sc. The following scholarships granted in 1895 have been continued for a second year on receipt of a satisfactory report of work done during the first year:—(1) University of Glasgow, Walter Stewart, M.A., B Sc, Universities of Glasgow and Berlin; (2) University of St. Andrews, Henry Charles Williamson, M.A., B Sc, Marine Laboratories, Naples and Kiel; (3) University College, Dundee, James Henderson, B Sc, Polytechnicum, Munich The scholars from the University of Edinburgh and the Owens College, Manchester, have resigned on obtaining public appointments. The reports of the scholars from the Mason College, Birmingham, and the University College, Bristol, are not yet due. The following scholarships, granted in 1894, have been exceptionally renewed for a third year:—(1) University of Edinburgh, John Carruthers Beattie, B Sc., Universities of Vienna and Berlin; (2) University of Aberdeen, William Brown Davidson, M A, B Sc., Universities of Wurzburg and Leipzig.

EKMAN PULP AND PAPER DEBENTURES.—The Ekman Pulp and Paper Company, Limited, notifies that its definitive four-and-a-half per cent. first mortgage debentures are now ready for issue in exchange for the fully-paid scrip certificates, which can be presented daily (Saturdays excepted) at the offices, 57½, Old Broad-street, E.C.

THE BIRCH *v.* HARRAP PATENT CASE.—In the Appeal Court, before Lords Justices Lindley, Lopes, and Rigby, the hearing of the appeal against Vice-Chancellor Hall's decision in the case of Birch v. Harrap and Co., has been heard. The court came to the conclusion that there was no infringement, and on that ground upheld the decision of the Vice-Chancellor, dismissing the appeal with costs.

AN IMPORTANT SEWER-GAS CASE.—In the Court of Appeal, before Lord Justice Lindley and Lord Justice Lopes, on Saturday last, the action Durrant *v.* the Corporation of Yarmouth was again mentioned. This was a suit brought under Lord Campbell's Act by the executors of the late Mr. Durrant against the Corporation of Yarmouth to recover £3,000. damages for the death of that gentleman, which was alleged to have been caused by the negligence of the defendants in carrying out certain sewage works near his house, whereby the water in his well was contaminated with sewage, and sewage gas entered his house, causing him to contract typhoid fever, from which he died. The Corporation had applied to Mr. Baron Pollock for further particulars, which he had refused to order. The Corporation appealed. Mr. Rose Innes appeared for the Corporation. Their lordships dismissed the appeal.

INDIAN INDIGO CROP.—With reference to the indigo crop in India, it is reported from Calcutta that good rain has fallen in all parts of Lower Bengal. The manufacfure of the dye has only begun at a few factories, and at these the produce is reported to be poor; the district of Purneah, however, forms an exception, as most concerns there are manufacturing with fair produce. Heavy rain has been advised from all the Behar districts, and has materially improved crop prospects in that division; a spell of fine weather would be advantageous. In Tirhoot produce is generally rather poor; in Chumparun, on the other hand, produce is fair as a rule. In Chuprah the rain has been rather late, and the crop consequently backward. Benares generally reports an excellent rainfall, followed by a week of fine weather, which has much improved the condition of the crops; the plant is, however, still rather small, having not yet fully recovered from the effects of the long drought. North-west advices are, as a rule, very good, but a further rainfall would be acceptable in that division.

TREATMENT OF SEWAGE AT DALMARNOCK.—From the report by the general manager on the operations during the year 1895-96 and comparison with those during the preceding year it appears that during last year over 3,274 million gallons were treated at the works, equal to a weight of 14,631,641 tons, being an average of nearly nine million gallons or about 40,000 tons per day. From that liquid sewage there was extracted by precipitation 178,560 tons of crudge sludge, which which was reduced by filter pressing to 14,444 tons, at an average cost of 2s. $3\frac{8}{10}$d. per ton of pressed cake. In addition to that quantity, 2,232 tons of sludge were raised direct from the catchpits by the elevators. These two quantities made a total of 16,676 tons of solid matter removed from the sewage during the year, which was disposed of thus:—Sold as manure by the Cleansing Establishment, 4,900 tons; despatched by rail to refuse tips, 8,877 tons; deposited on grounds at the works, 2,899 tons—16,676 tons. As compared with the previous year it will be observed that the figures indicating quantities all show increases, while those indicating costs all show reductions, with the exception of the fractional increase on the item of filtration. The quantity of sewage treated is greater by 695,662,000 gallons, the total solids produced have been increased by 5,789 tons, the cost of pressed sludge cake produced has been reduced by $7\frac{3}{10}$d. per ton, the average cost of chemicals used has been reduced by 6s. $3\frac{5}{10}$d. per million gallons, and, notwithstanding the fouler nature of the sewage dealt with, the working expenses have been reduced by 10s. 11d. per million gallons.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue firm, 90's still being quoted 3s. 9d., and 50/90's 2s. 9d. to 2s. 10d. In the forward position prices remain the same. Carbolic acids are steady, though rather quiet. Prices being at a stand still for the moment, the future is somewhat problematical. Crude, 60%, still figures at 2s. 2d., and 40% crystals at 7d. Solvent naphtha is firm at 1s. 5d., there being a good Continental demand. Crude steady at 11d. There is a disposition towards activity in anthracene. Creosote unaltered. Pitch is firmer, but price still remains 32s., f.o.b. East Coast.

Sulphate of ammonia is easier all round, the collapse in [price] having had an adverse effect on the market in general. [There] to have been a little more doing in prompt since the drop, [but] like a spurt has been experienced so far. Quotations are [nominal] but nearest representative prices seem to be: London outs[ide] £7. 17s. 6d. to £7. 16s. 3d., Liverpool £7. 17s. 6d., Hull and Leith £7. 12s. 6d. to £7. 15s. Nothing doing in forwa[rd].

MISCELLANEOUS CHEMICAL MARKE[TS]

In the alkali trade the demand is only moderate for [most] products. As will be seen by the Board of Trade returns, [there is a] considerable falling off in exports of alkali and bleaching pow[der] the past two months. This, of course, has been met by cor[responding] curtailment of output, and prices stand unaltered, both for p[rompt] forward delivery. For bleaching powder spot quotation is [£5] f.o.r. makers' works, though slightly lower prices have been [done] f.o.b. prices rule from £6. 10s. to £7. per ton for hard w[hite]. Alkali, 58%, steady, at £3. 7s. 6d., bags, f.o.r., and same [for] 1897. Soda crystals unchanged. Caustic soda steady for [both] prompt and forward, but rather a lower tendency on t[he] strengths. To-day's prices are as follows: f.o.b., Liverpool, [76%] 5s.; 74%, £8. 5s.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. [for] lots and upwards. Chlorate of potash, 4½d. Soda, 5¾d., [steady] quiet thereat. Sulphur firm, with still an advancing tenden[cy]. cake, quiet, at 21s. 6d. to 22s., f.o.r. Bicarbonate unchanged. [Sulphate] of copper, steady, at £16. 15s., f.o.b. Sulphate of iron [still] scarce, and higher prices are firmly maintained. Brown [acetate of] lime unaltered in price, and business dull-grey, £8. net, [brown] sugars of lead there is only little enquiry, and prices are u[nchanged]. Aniline oil and salt are higher in sympathy with the raw [material]. White powdered arsenic, slightly easier, at £22. 10s. net. [Liquor] ammonia selling at rather low figures. Other ammonia salts [unchanged]. change. Yellow prussiate of potash, 6½d per lb. Cyanide [of potash] 1d per lb. Potash, caustic and carbonate, continue scar[ce] spot and higher prices are maintained. In miscellaneous [chemicals] business generally is quiet.

REPORT ON MANURE MATERIAL.

The market continues to be very quiet, with very little [doing] on the part of buyers to operate. Quotations for mineral p[hosphates] remain as last reported, and no transactions of importa[nce] transpired. There is nothing doing in River Plate bones, [but] would probably be buyers at £3 12s 6d. per ton, autumn [shipment] good United Kingdom ports; sellers' idea are about 2s. 6[d.] above this price. East India bone meal continues to offer at [£5] per ton for autumn shipment, but less would have to be taken [than] to induce business. Crushed Kurrachee bones are now [at] £3. 12s. 6d. per ton, and business has been done at t[his]. Nitrate of soda is quiet, but steady at 8s. per cwt. for [spot] 7s 10½d. per cwt. for ordinary quality. In miscellaneous [nitrates] there is nothing special to report.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron, lower: Scotch warrants [cash] 45s. 5d.; Middlesbrough 36s. 5½d. cash, and hematite [warrants] Copper, easier: Chili bars, G. O. B.'s and G. M. B's., [spot] £47. 17s. 6d. to £48 2s. 6d. cash, and £47. 16s. 3d. to £4[8] three months. Tin, steady: Straits closed at £60. to [£60. 5s.] cash, and £60. 11s. 3d. to £61. 1s. 3d. three months; A[ustralian] £60. 17s. 6d. cash. English ingots, £63. 10s. to £64. Lea[d]: Spanish, £10 18s 9d; English, £11. 2s 6d. Silesian [spot] ordinary, £17. Nickel, 1s. 2½d. Antimony, £29. 10s. Qu[icksilver]: First hands, £6. 7s. 6d.; second hands, £6. 6s. 6d. *Copper* steady: Cape, $2\frac{7}{16}$ to $2\frac{9}{16}$; Copiapo, 2½ to 2⅝; Libiola, [£]2 Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 22⅛ to 22¼; Tha[os] to 5⅝.

GLASGOW, WEDNESDAY.—Market flat, with fair [business] Scotch done at 45s. 7d., and 45s. 6d. cash, also at 45s. [6d.] 45s. 8d. one month; closing with buyers at 45s. 5½d. cash, [sellers] ask 45s. 6d. Cleveland done at 36s. 6½d. cash, also at 36s. 8[d.] 36s. 8d., one month; closing with buyers at 36s. 5½d. cash, [sellers] ask 36s. 6d. Cumberland hematite done at 46s. 6d. cash, [and] 46s. 8⅛d. one month; closing with buyers at 46s. 6d. cash, [sellers] ask 46s. 6½d. Middlesbrough hematite closes with buy[ers] 44s. 3½d. cash, sellers ask 44s. 5d.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are quiet, with a fair business doing. Sulphur is again stronger and price now quoted is £4. 7s. 6d. to £4. 10s. per ton. Caustic, 76/77%, £9. to £9 5s.; 70%, £7. 10s. to £7. 15s. per ton Soda crystals, £2. 2s 6d. per ton, gross weight, locally.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 7s. 6d. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton. nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, refined crystals, £6. 15s.; do, 90/95% crude calcined, £6; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30, per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s 6d. per ton, f.o.b. Tees.

COALS.—Trade continues firm, with little or no alteration in prices. Coke is steadier, with an increased consumption, both for export and home. Best Northumbrian steam, 8s. 6d. to 8s 9d per ton; second qualities, 7s. 6d. to 7s. 9d. per ton. Small steam, 3s. 6d. to 3s. 9d. per ton. Gas coal, 6s. 6d. to 6s. 9d. per ton Household coals, dull, 10s 6d. to 11s. per ton. Coke, in good demand, 15s. to 16s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The demand continues fair, but values of linseed and cotton oils continue to depreciate. Linseed oil, after declining a further 5s. per ton, turned firmer, and closes at last week's quotation. Cotton oil has declined also 5s. The imports up to date have been :—Linseed 425,771 quarters, against 329,818 quarters a year ago; rapeseed 67,964 quarters, against 92,100 quarters; cottonseed 99,070 tons, against 112,588 tons; olive oil 13,370 casks, against 7,877 casks; rape oil 2,461 casks, against 5 309 casks; oil cakes 9,414 tons, against 8,606 tons; tallow 44,939 cwts., against 8,532 cwts.; turpentine 11 431 barrels, against 12,761 barrels. Linseed oil, after declining to 14s. 9d. naked, on the spot, turned firmer, and closes steady at 15s to 15s. 1½d.; August, 15s 1½d., buyers; September-December, 15s. 6d., buyers; and January-April, 15s. 9d., buyers. May-August quoted 16s. 3d. Boiled and refined, £1. to £2. per ton extra. Export for the week, 3,100 cwts. Refined cotton oil has declined about 5s. per ton, closing dull at 13s. 9d. naked, spot; August-October deliveries offered at 13s. 10½d., and Nov.-April at 14s; barrels, 30s., and casks £1. per ton extra. Export of refined oil for the week has been 5,860 cwts. Turpentine offers at 19s. 6d. per cwt. Olive oil unchanged. Castor oil, 2¾d. per lb. for first pressure. Cod oils, £17. to £19. per ton. Brown Yorkshire grease, £8. to £9. per ton. Locomotive grease, £10. per ton. Boiled siccative oil, £11. per ton.

CAKES.—Linseed cakes firm, 95% pure, £5 7s. 6d. to £5. 10s; Russians, £5. 2s. 6d.; Americans, £4. 17s. 6d. Cotton cakes quiet but firm, supply short; best makes, £3. 17s. 6d. to £3. 10s., December-April; seconds, 5s. per ton less. Rape cakes, East India, £3 7s 6d. Black Sea for tillage purposes, £2. 5s.

PAINTS.—Makers appear to be highly satisfied with the position of business, orders being plentiful. Prices are :—White lead and oxide of zinc unchanged; red lead, £14. 15s per ton; dry venetian red from £4.; dry ochres from £2. 15s, in bags or casks; oxide of iron from £6. per ton; barytes, 60s. per ton, in bags. French chalk, 70s. to 80s. per ton. Black, blue, green, and red colours, in oil, from £11. per ton. Ready-mixed paints, in tins, from £24. per ton Paint remover, £1. 5s. to £1. 10s. per cwt. Imperial black varnish, £5. 10s. per ton, in barrels. Oak varnish, 5s. 6d. per gallon.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is quiet and unaltered in price. Olive is firm with a good inquiry, sales having been made at £29 per tun for Malaga. Linseed is a shade firmer, Liverpool makes in export casks now being steady at 17s. 6d. to 19s. per cwt., according to quality. Cottonseed presents no change and remains steady, at 15s. 6d. to 16s. for Liverpool refined, and 16s. to 16s. 6d. for American, according to quality and quantity. Castor oil is steady. There is only a small quantity offering in good seconds Calcutta, at 3⅛d. to 3¼d. First pressure French remains at 2 1/16d. to 2⅝d. per lb. There is nothing fresh to report in tallow. In resin, common continues to rule very firm, and the prices for medium and fine are steadily maintained. Spirits of turpentine are steady at the lower price now ruling, a fair business being done on spot, at 19s. 3d. per cwt. Petroleum presents no fresh feature, the market being quietly steady, at 6¼d. to 7½d. for American, and 5½d. per gallon for Russian refined.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue. 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20 Zinc oxide, £22 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The meeting of the Mineral Oil Association on Wednesday last to fix the price of burning oil for the new season was duly held, but owing to important absences had to be adjourned for another week. The adjourned meeting will be held to-morrow. High gravity lubricating oils are in good request at the old prices, but 865° is weaker, and has been marked at rather a low price range—namely, £4. 7s. 6d. to £5. Semi-refined paraffin wax has of late been somewhat neglected, and is now quoted 2d. to 2⅛d. per lb. Other oils and paraffins are unchanged. Sulphate of ammonia has been still worse than before, and last week was said to have been done at £7 11s. 3d., the lowest ever recorded, but this sale has not been fully authenticated. The article has rallied a bit since, and the quotation is now £7. 12s 6d. to £7. 15s. spot. Nothing forward. In general chemicals the position is hardly at all changed, quiet being the prevailing condition. Sulphate of copper is firm, and sulphur is inclined to a further rise. Caustic slightly firmer.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 7s. 6d., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 9d. to 8s. 1½d.; sulphate of ammonia, £7. 12s. 6d. to £7. 15s. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 15s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 7s. 6d. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 855 bags beet refined and 8,153 bags beet unrefined.

New Companies.

J. and E. Atkinson, Ltd.—CAPITAL, £200,000, in shares of £100 each. This company has been formed to enter into an agreement to carry on the business of soap makers, essences, and all kinds of perfumery. The subscribers to the memorandum of association are:—Mrs C. E. Tattersall, Charlton-place, Bishopsbourne, Kent; Mrs E J West, 12, Cleveland-square, Hyde Park, W.; J. E. de Vue Tattersall, Charlton-place, Bishopsbourne, captain; E. V. Barrett, Badlesmere, Dryburgh-road, Putney, manufacturer; W. Tattersall, Union Club, Trafalgar-square, gentleman; H. H. Hobson, St. Claire, Queens-road, Richmond, gentleman; C. H. Roberts, Fairview, Maidenhead, Berks., merchant.

London and Manchester Plate Glass Co., Ltd.—CAPITAL, £150,000, in £10. shares. This company has been formed to acquire and carry on the business and works of the London and Manchester Plate Glass Co., Ltd (in liquidation), at Sutton, St Helens, Lancashire. The subscribers to the memorandum of association are:—G Stewart, J.P., Cramond, South Shore, Blackpool; W. Hawkins, 11, Fountain-street, Manchester, merchant; H. Taylor, 11, Fountain street, Manchester, merchant; J. Grundy, Alexandra-road, Southport, coal proprietor; H. Spurrier, J.P, Marstow-on-Dove, Derbyshire; A. W. Grundy, 14, John Dalton-street, Manchester, solicitor; A Murray, Kersal, Manchester, chartered accountant.

Carbide Syndicate, Ltd.—CAPITAL, £1 200, in shares of £10. each. This company has been formed to acquire a patent for the manufacture of calcium carbide, and to manufacture and deal in export and import chemical and industrial preparations

Carboy Hamper Co., Ltd.—CAPITAL, £1,000, in £1. shares. This company has been formed to acquire and administrate the business of carboy hamper manufacturers now carried on by F Duckworth, of Radcliffe, near Manchester. The first directors are Messrs F. Duckworth, J Hampson, and H Rostron.

Claus Tin Process, Ltd.—CAPITAL, £50,000., in shares of £1. each. This company has been formed to acquire, develop, and work certain patent rights for the extraction of tin and other metals from their ores The subscribers to the memorandum of association are:—C Vautin, 29, Basinghall-street, E.C., metallurgist; C. H Weeks, 50, Foxham-road, Tufnell Park, N, solicitor; J. T. Hayter, 8, Mehetabel-road, Hackney, N.E., writer; C. F. Claus. 94, Grove Park-terrace, Chiswick, metallurgist; P. H. Gardner, 28. Basinghall-street, E C, accountant; J. E. T. Wells, 58, Loder-street, Old Kent-road, S E, clerk; T. H. Wood, 1, Radnor-street, Peckham, S E, clerk.

Manlove, Alliott and Co, Ltd.—CAPITAL, £150,000, in shares of £10. each. This company has been formed to take over as a going concern the business of Manlove, Alliott and Co., Ltd (registered in 1888), and to trade as sanitary and general engineers. The subscribers to the memorandum of association are:—J B. Alliott, The Park, Nottingham, engineer; J. M. C. Paton, The Park, Nottingham, engineer; J. Hind, Fletcher-gate, Nottingham, solicitor; W. B. Thorpe, Nottingham, maltster; J. W. Hind, Nottingham, solicitor; T. Cantrell, Burford-road, Notts, clerk; O. W. Hind, Popplewick, Notts, gentleman.

West of England Fish Guano and Oil Co, Ltd. CA £10,000, in £10. shares. This company has been formed to ca the manufacture of chemical and other manures and trade as d blood, animal, fish and vegetable matters, bone boilers, tallow m and soap makers The subscribers to the memorandum of asso are:—M. W. Pearce, Dalymount, Benalston, Devon, gentleman Woods, 38, Woodsworth-road, Birmingham, merchant; A C. M.B., Camb, M.R C.I., Braidwood-terrace, Plymouth; T. C 9, Carlisle-terrace, The Hoe, Plymouth, gentleman; G H J 61, Old Town-street, Plymouth, baker; R. C. S Jarman, 27, Gl street, Plymouth, superintendent; A. C. Crossing, 43, Childr New Cross, S E, engineer.

James Light and Son, Ltd.—CAPITAL, £30,000., in £10 This company has been formed to acquire the business of oil, and grease bleachers and refiners, drysalters, cotton waste dealer carried on by James Light and Sons, Manchester and Liverpool. subscribers to the memorandum of association are:—J. B Riversdale, Waterloo, merchant; Mrs E J. Light, Riv Waterloo; Mrs S. Light, Arbour, Ramsey, Isle of Man; Light, M A., 2, Wilton-place, Belgrave-square, S W.; J. B 11, Rumford-street, Liverpool, merchant; J. Gowan, 11, Ru street, Liverpool, agent; W. H Walker, 42, Castle-street, Liv chartered accountant.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J. C. GOODALL and T. W. G. BATES, oil refiners and grease manu Newcastle-on-Tyne, under the style of Goodall, Bates, and Co.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending August 1st.

Acetic Acid—
Holland, 70 pks. F. J. Putz & Co.
,, 121 A. & M. Zimmermann
,, 100 R. W. Greeff & Co.

Acetone—
Holland, 1 pk. G. Rahn & Co.

Alkali—
Canada, 350 c. J. Barber & Co.

Alum—
Holland, 416 pks. Ohlenschlager Brs.
Germany, 12 ,,

Ammonia—
Sydney, 7 t. A. Hunter & Co.

Amyl Acetate—
Germany, 1 dm Stein Brs.

Anthracene—
Spain, 103 cks. Burt. Boulton & Co.

Antimony Ore—
Italy, 50 t. J. Bamber
Holland, 2 H Davis
Portugal, 50 J. Bamber
A. Turkey, 68 ,,

Asbestos—
Canada £132 L. & I. D. Jt. Co
,, 32 W. Byford
,, 800 Vokins & Co.
Holland, 20 Phillipps & Graves

Barytes—
Belgium, 4 cks. 100 bgs. Ryley & Co.
,, 70 brls. J. L. Lyon & Co.
Holland, 96 ,,

Bleaching Powder—
Holland, 33 cks. J. M. Steel & Co.

Bone Meal—
Germany, 10 t. A. Hunter & Co.
Calcutta, 20 Perkins & Homer
E. Indies, 325 A. Hunter & Co.
,, 50 Fox, Roy & Co.

Boracite—
Sanderma 456 bgs. J. Puddy & Co.

Bromide of Iron—
Germany, 15 cks. A. & M. Zimmermann

Bromine—
Germany, 60 cs. A. & M. Zimmermann

Camphor—
France, 2 pks. Union L. Co.
Germany, 100 H. A. Litchfield & Co.
,, 103 cs. City Coml Wf. Co.
,, 105 Brown & Elmslie
,, 102 S. Figgis & Co.
,, 5 Lewis & Peat
,, 8 T. H. Lee

Caoutchouc—
Singapore, 90 c Huttenbach & Co.
Zanzibar, 64 L. & I. D. Jt. Co.
Rangoon, 177 ,,
,, 77 A. Howden & Co.
,, 137 Prop. Hay's Wf.
Zanzibar, 37 S. Figgis & Co.
France, 24 W. Balchin
,, 20 Prop. Bull Wf.
E. Indies, 170 Nicholson's Wys. Ld.
,, 11 Prop. Bull Wf.
,, 16 Culverwell, Brooks & Co
Italy, 242 Nicholson's Wys., Ld.
China, 25 Elkan & Co.
U. States, 50 Prop Bull Wf.

Carbolic Acid—
Holland, 19 cks. J. Owen

Castor Oil—
Italy, 4 cs. G. N. de L. Hill & Co.
Belgium, 20 brls. Anderson, Weber & Co.
Italy, 10 Capt Barber
,, 20 A. & M. Zimmermann
France, 6 R. W Greeff & Co.
Italy, 50 C. Windschnegl & Co.
France, 50 J. T. Morton

Caustic Potash—
Germany, 60 drs. J. M. Steel & Co.
France, 20 Petri Brs.

Chemicals (*otherwise undes.*)**—**
France, £77 Vokins & Co.
Holland, 30 F. Boehm
Belgium, 10 O. Scholzig
U. States, 230 C. Loch
Belgium, 55 Société John Cockerill
Germany, 10 Jenson & Nicholson
,, 810 A. & M. Zimmermann
,, 68 H. Lambert
,, 50 L. & I. D. Jt. Co.
U. States, 230 ,,
Holland, 35 J. Barber & Co.
,, 10 Phillipps & Graves
Germany, 25 T. H. Lee
France, 11 Burnett Brs & Sons
—— 190 Brandram Brs. & Co.
Holland, 16 W. Burton & Sons
U. States, 180 E. Swallow
Germany, 36 Craven & Co.
Holland, £3 Hernu, Peron & Co.

Chromium Fluoride—
Holland, 20 cs. R. W. Greeff & Co.

Citrate of Lime—
Italy, 22 pks Thames S. T. & L. Co.

Cobalt Ore—
Sydney, 132 t. Sawer, Sons & Co.

Cobalt Oxide—
France, 14 cs. Burnett Brs.

Copperas—
Germany, 32 cks F. Smith

Cream of Tartar—
France, 10 pks. W. C. Bacon & Co.
Germany, 1 Domeier & Co
Holland, 20 Kirkpatrick, Barr & Co.
Italy, 10 Thames S. Tug & L. Co. Ld
France, 5 cks W. J Bush & Co.
Spain, 10 B. & F. Wf. Co.
,, 10 W. C. Bacon & Co
,, 5 J. Knill & Co
Portugal, 14 C. Webster

Dyestuffs—
Argols
Italy, 579 pks. Thames S. Tug & L. Co.
,, 380 B. Jacob & Sons
Spain, 525 ,,
Cochineal
Teneriffe, 73 pks. W. Duttson & Co
Cutch
Rangoon, 350 pks. A. Howden & Co.
Cape, 15 Dyster, Nalder & Co.
Extracts
Denmark, 21 cs. Sorensen & Co.
Austria, 100 brls. J. & R. Grant
France, 80 cks, S. M Frankenstein & Co.
,, 35 B. & F. Wf. Co.
,, 200 bxs. T. H. Lee
Gambier
Cape, 6 bls. Dyster Nalder & Co.
Indigo
Madras, 64 chts. L. & I. D. Jt. Co.
Calcutta, 6 Lewis & Peat
,, 7 Seton, Laing & Co
Madras, 10 P. Macfadyen & Co.
,, 5 Binny & Co.
,, 8 Croysdale & Co.
,, 1 H. J. Perlbach & Co.
Calcutta, 1 Binny & Co.
E. Indies, 47 L. & I. D. Jt. Co.
,, 9 J. Haddon Hall & Co
Logwood
B. W. I., 3 t. L. & I. D. Jt. Co.
Myrabolams
Madras, 64 pks. L. & I. D.
Shumac
Italy, 200 bgs. W.
,, 50 Ehrenfor
Tanners' Bark
Belgium, 28 pks. Lesch
Durban, 73 t. A. J. Ha
Adelaide, 30 Dyster,
Turmeric
Bombay, 65 bgs. Brown & G. A. H.
,, 285 G. A. H.
E. Indies, 101 J. P. M
Bombay, 201 pks. Major
Farina—
Holland, 50 bgs. J. Knill
Italy, 12 cs C. Tennant
France, 1 pk Herne,
Calcutta, 4 W. Newson
,, 200 Wrighton
Holland, 200 Seawen
,, 50 W. Kitchie
Germany, 100 bgs. Ohlensch
Glucose—
U. States, 250 pks. 250 c. L. &
,, 692 692 c. F
Morton
,, 800 800 G.
France, 200 200 L. N
U. States, 2,256 2,706 B
,, 100 600 Dun
Rob
,, 50 300 C. Sou
,, 100 597
,, 400 400 R. G
,, 750 750 L. Ne
,, 750 750 T. M. D
,, 4,500 4,302 F
Pelly
Glue—
——, £1,525 —
Iron Oxide—
Austria, 3 cks. O'Hara &
Iron Sulphate—
U. States, 80 brls. L. & I. D. J
Lead Acetate—
Germany, 32 cks. F. Ro

Lime—
Belgium, £160 L. Sommerfeld
Litharge—
Germany, 3 cks. J. Barber & Co.
Holland, 46 Spies Brs. & Co.
,, 3 J. Owen
Lithopone—
Holland, 60 cks. Burrell & Co.
,, 8 G. Rahn & Co
Manganese Chloride—
Germany, 12 cks. Petri Brs.
Manure—
Sydney, 9 t. L. & I. D. Jt. Co.
Pisagua, 1,700 W. Montgomery & Co.
Metallic Oxide—
Germany, £55 Craven & Co.
,, 10 cks. Brit. Anti-Fouling C. Co.
Methyl Alcohol—
Germany, 11 dms. Stein Brs.
Mica—
E. Indies, £715 E. Davis & Co.
,, 55 W. M. Smith & Sons
,, 90 W. Brandts, Sons, & Co.
Ceylon, 290 E. Davis & Co.
U. States, 140 W. Dixon
Molasses—
W. Indies, 100 cks. 1,000 c. Middleton's Wf. Co.
U. States, 97 534 Deering & Robottom
Naphtha—
Belgium, 6 dms. Leach & Co.
,, 4 H. Lorenz
Holland, 99 Burt, Boulton, & Co.
Spain, 36 brls. ,,
Nitre—
Holland, 8 cks. Anderson, Weber, & Co.
Ochre—
U. States, 72 brls. Taylor Brs.
France, 70 W. Harrison & Co.
Holland, 4 cs. 4 pks. Phillipps & Graves
Paint—
Germany, 1 cs. T. H. Lee
Phosphate Rock—
Belgium, 150 t. Leach & Co.
Pitch—
U. States, 103 brls. Dussek Brs. & Co.
N. Russia, 200 W. F. Malcolm & Co.
Belgium, 18 Abbey, Abbey, & Co.
Plumbago—
Germany, 96 cks. B. Gallaway
Ceylon, 100 G. R. Haller
,, 148 R. G. Hall & Co
Germany, 4 T. H. Lee
Ceylon, 200 Williams, Torrey, & Co.
U States, 7 B. S Cohen
Ceylon, 85 Doulton & Co.
,, 300 J. Thredder, Son, & Co.
Germany, 10 W. J. Davies & Sons
Potashes—
Germany, 5 c. Blondeau & Co.
Potassium Carbonate—
Germany, 420 c. W. G. Blagden
France, 141 J. A. Reid
Holland, 100 Petri Brs
Potassium Chloride—
Holland, £35 H. Johnson & Sons
Potassium Cyanide—
Holland, 10 cs. Townsend Brs.
Potassium Sulphate—
Belgium, £54 Soundy & Sons
Prussiate—
Belgium, 20 brls. Perkins & Homer
Pyrites—
Spain, 1,513 t. Anderson, Anderson, & Co.
Quicksilver—
Italy, 200 btls. H. Bath & Son
Spain, 78 cks. H. J. Enthoven & Son
Rosin—
France, 28 brls. Davey Brs.
U. States, 60 American Trading Co
Saltpetre—
E. Indies, 454 bgs. A. B. Curtis & Co.
,, 930 L. & I. D. Jt. Co.
,, 417 Arracan Co., Ltd.
,, 664 Lucas & Spencer's Wf.
Germany, 95 cks. P. Hecker & Co.
Soda—
Belgium, 115 c. F. Claydon & Co.
Sodium Prussiate—
Belgium, 77 brls. H. Johnson & Sons
Sodium Silicate—
Germany, 5 cks. H. Lambert
Starch—
Holland, 20 cs. G. Rahn & Co.
,, 11 C. Ruby & Co.
Belgium, 60 Leach & Co.
Holland, 150 Phillipps & Graves
Belgium, 592 F. Claydon & Co.
Holland, 55 Hernu, Peron, & Co.
U. States, 1 brl. F. W. Mann
Germany, 48 cs. Phillipps & Graves
U. States, 100 brls. G. Smith & Son
Stearine—
Holland, 26 bls. J. Owen
France, 244 bgs. H. Hill & Sons
Belgium, 38 6 cks. ,,
France, 250 G. Boor & Co.
U. States, 4 L. & I. D. Jt. Co.
Sulphur—
Italy, 200 t. Fuerst Brs.
,, 208 Brandram Brs.
,, 5 Typke & King
Talc—
France, £40 Brasch & Rothenstein
Tar—
N. Russia, 300 brls. Hindley & Co.
,, 2,173 W. F. Malcolm & Co.
Germany, 100 W. Beard & Son
Tartar—
Italy, 21 cks. Howards & Sons
Tartaric Acid—
Holland, 20 pks. B. & F. Wf. Co.
France, 5 ,,
Ultramarine—
Holland, 16 cs. G. Rahn & Co.
Belgium, 6 pks. 10 cks. W. Harrison & Co
Holland, 19 Phillipps & Graves
Belgium, 1 ck. H. Kohnstamm
Holland, 16 Haeffner, Hilpert, & Co.
,, 8 Hernu, Peron, & Co.
Varnish—
France, 11 pks. Flageollet & Co.
U. States, 15 Anglo-American Oil Co.
France, 20 Burnett Brs. & Sons
Belgium, 9 Stobbs, Wilson, & Co.
U. States, 88 Pinchin & Johnsen
White Lead—
Holland, 19 cks. Blundell, Spence, & Co.
Belgium, 97 T. & W. Farmiloe
,, 19 Perkins & Homer
,, 40 W. & A. Hampton
Germany, 25 N. J. Fenner & Co.
Holland, 48 T. & W. Farmiloe
Germany, 10 H. Lambert
,, 19 J. Bew
,, 22 Spies Brs. & Co.
Holland, 29 Burrell & Co
France, 39 J. Watt & Son
Germany, 39 D. Storer & Sons
Holland, 4 J. Barber & Co.
Wood Pulp—
Norway, 3,170 bls. Moreton Cox Brs. & Co.
Holland, 255 Phillipps & Graves
Sweden, 5,750 Moreton Cox Brs. & Co.
Germany, 400 Christophersen & Co.
Holland, 83 pks. Henderson, Craig, & Co.
Norway, 40 W. D. Cork
,, 2,776 Tough & Henderson
,, 367 W G Taylor & Co
,, 64 Johnsen & Jorgensen
,, 80 W. Friedlaender
Austria, 450 Becker & Co.
Denmark, 160 bls. Hummel & Co.
Sweden, 200 pks. ,,
,, 240 Henderson, Craig, & Co.
,, 480 W. G. Taylor & Co.
,, 50 Union L. Co.
Germany, 108 G. S. N. Co.
Zinc Oxide—
Holland, 5 cks. H. Johnson & Sons
U. States, 300 brls. M. Ashby, Ltd.
Holland, 40 cks. Spies Brs. & Co
Germany, 50 brls. M. Ashby, Ltd.
Holland, 500 cks. Soundy & Sons
,, 61 J. Matton
Zinc White—
Holland, 40 cks. Spies Brs. & Co.
,, 50 Burrell & Co

LIVERPOOL.

Week ending July 30th.

Albumen—
Marseilles, 7 cs.
Aniline Colours—
Paris, 8 cs. 3 cks. Seine & Mersey S. S. Co., Ld.
Antimony Ore—
Marseilles, 12 bls.
Asbestos—
Rotterdam 1 bl.
Barytes—
Antwerp, 50 bgs.
Borate of Lime—
Valparaiso, 488 sks.
Borax—
Valparaiso, 1,018 sks.
Caoutchouc—
Valparaiso, 29 brls. F. Huth & Co.
Castor Oil—
Coconada, 225 cks.
Antwerp, 29 brls.
Calcutta, 760 cs. Ralli Brs.
Marseilles, 57 J. H Rayner & Co.
Leghorn, 5
Marseilles, 138
Citric Acid—
Messina, 6 cks.
Cod Oil—
Hamburg, 10 brls.
Colours—
Antwerp, 3 cs 47 pks.
Rotterdam, 1 bx
Ghent, 6 brls.
Oporto, 1 Read Holiday & Co.
Cottonseed Oil—
New York, 125 brls.
Dyestuffs—
Annatto
Rotterdam, 1 carboy
Argols
Leghorn, 1 ck.
Divi Divi
Hamburg, 40 bgs.
Halifax, 1
Extracts
Hamburg, 120 cks.
Fustic
New York, 4,817 ps. B Ackerley & Son
Hamburg, 1 tk.
Tampico, 6,567 R. Bulman & Co.
Logwood
Hamburg, 1 bdl. 1 tnk.
Kingston, Ja., 180 t.
Shumac
Messina, 925 bgs
Palermo, 1,018
Turmeric
Calcutta, 999 bgs.
Valonia
Dragomesti, 2,750 bgs. Papayanni & Jeremias
Aliki, 860 ,,
Gelatine—
Bordeaux, 10 bls.
Glucose—
New York, 250 brls.
Boston, 50
Glue—
St. Nazaire, 21 cks. 25 cs.
Rotterdam, 230 bgs.
Iodine—
Valparaiso 70 brls. A. Gibbs & Sons
Iron Oxide—
Trieste, 15 cks. Gabairi Brs.
Limestone—
Antwerp, 1 crt. J. T. Fletcher & Co
Manganese Ore—
Calcutta, qty.
Manure—
Hamburg, 2,642 bgs.
Montreal, 2 tcs
Minium—
Rotterdam, 11 cks.
Ochre—
Gandia, 58 brls.
Marseilles, 50
Oxalic Acid—
Rotterdam, 2 cks.
Paint—
Boston, 12 cs. Bahr, Behrend & Ross
Paraffin Scale—
New York, 127 brls. Thompson & Bedford
Plumbago—
Genoa, 100 bgs.
Potassium Chlorate—
New York, 200 kgs.
Pumice Stone—
Messina, 67 cs.
Rosin—
Savannah, 1,400 brls.
Salt—
Baltimore, 350 brls.
Saltpetre—
Calcutta, 974 bgs.
Hamburg, 50 kgs.
Karachi, 200
Soap—
Boston, 13 brls. Leeds Dyeware Co.
New York, 250
Marseilles, 30 cs. 20 dms.
Rotterdam, 2
Bari 40
Soapstone—
Bordeaux, 200 bgs. G. G. Blackwell, Sons & Co.
Sodium Nitrate—
Junin, 10,170 bgs. F. Huth & Co.
Starch—
New York, 900 bgs.
Rotterdam, 200 cs. Brown, Geveke & Co.
,, 86 5 cks.
Sulphur—
Catania, 100 cks 101 brls. 150 bgs.
Tallow—
Boston. 389 tcs.
Philadelphia, 200
Tar—
Archangel, 2,000 brls. J. H. Hinde & Co.
Tartar—
Bordeaux, 24 cks.
Hamburg, 4
Naples, 2
Tartaric Acid—
Marseilles, 1 ck.
Rotterdam, 4
Treacle—
Montreal, 20 kgs.
Philadelphia, 2,000 brls.
Waste Salt—
Harburg, 200 t.
Hamburg, 200
Wood Pulp—
Skien, 136 t. 306 bls. H. Tyrer & Co.
,, 4,000 bls. Blydt, Paris & Pace
Drammen, 3,800 Johnsen & Jorgensen
Oporto, 20 Cromor Wood Pulp Co
Christiansand, 5,340 Becker & Co.
Gothenburg, 6 pks. G. Schenkenwald & Co.
Halifax, 86 A. J. Kidston & Co.
Rotterdam, 102
Zinc Ashes—
River Plate, 292 bgs. G. Gottschalck & Co.
Zinc Oxide—
Rotterdam, 5 cks.
Zinc White—
Rotterdam, 16 cks.

MANCHESTER.

Week ending August 1st.

Acetate of Lime—
New York, 1,059 bgs.
Antimony—
Treport, 2 cks.
Antimony Salt—
Rotterdam, 17 cks.
Arachide Oil—
Rotterdam, 1 ck.
Asbestos—
Rotterdam, 3 crts
Bone Ash—
Rio Grande Do Sul, 312 t. Haycroft Pithech
Caustic Potash—
Hamburg, 20 dms.
Chromium Fluoride—
Rotterdam, 6 cks.

Colours—
Boulogne, 1 ck. 1 cs.
Rotterdam, 35 43 138 brls. 12 bxs.
Ghent, 2
Antwerp, 36 4 pks.
Treport, 4

Cream of Tartar—
Rotterdam, 20 cks.

Creosote Salt—
Rotterdam, 4 brls.

Dyestuffs—
Alizarine
Rotterdam, 32 cks.
Indigo
Rotterdam, 2 chts.
Logwood
Belize, 560 t. 10 c.

Farina—
Rotterdam, 100 bgs.
New York, 294
Stettin, 1,700 Browne, Geveke, & Co.
,, 585

Glue—
Rouen, 13 cks. 10 cs.
Rotterdam, 5 20 22 bgs.
Stettin, 7
Treport, 10 bls.

Lead Acetate—
Stettin, 8 cks.

Limestone—
Antwerp, 1 crte. J. T. Fletcher & Co.

Minium—
Rotterdam, 7 cks.

Oxalic Acid—
Rotterdam, 30 cks.

Potash—
Treport, 30 dms.

Potassium Chloride—
Hamburg, 10 cks.

Potassium Oxalate—
Rotterdam, 1 ck.

Pyrites—
Huelva, 1,160 t.

Rosin—
Savannah, 4,030 brls. Co-op. W'sale Society

Sodium Nitrate—
Rotterdam, 23 cks.
Antwerp, 10

Starch—
Rotterdam, 180 cs.
New York, 1,189 bgs.
Ghent, 16

Tallow—
New York, 200 tcs. Co-op. W'sale Society

Tartar—
Hamburg, 29 cks.

Tartaric Acid—
Rotterdam, 4 cks.

Treacle—
Treport, 3 cs.

Ultramarine—
Hamburg, 4 cks.

Waste Salt—
Harburg, 203 t. Manchester Ship Canal Co.
Hamburg, qty.

Wood Pulp—
Christiania, 2,020 bls Kellner,
(Thro' Barrow) Partington P. P. Co.
Fredrikshald, 3,725
Christiania, 1,546
Rotterdam, 52

Zinc Ashes—
Stettin, 15 cks.

Zinc Oxide—
New York, 100 brls.
Rotterdam, 75

Zinc White—
Rotterdam, 8 cks.

HULL.

Week ending August 1st.

Albumen—
Libau, 1 cs.
Riga, 11 Wilson, Sons, & Co., Ld.

Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.
Leghorn, 20 ,,

Arsenic—
Hamburg, 25 brls. Wilson, Sons, & Co., Ld.

Barytes—
Antwerp, 19 cks. Bailey & Leetham
,, 33 H. F. Pudsey
Hamburg, 44 Blundell, Spence, & Co
Riga, 50 Wilson, Sons, & Co., Ld.
Bremen, 28 G. Holmes & Co.
,, 40

Castor Oil—
Antwerp, 4 cks. Bailey & Leetham
Genoa, 11 cs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Bremen, 2 kgs. Veltmann & Co.
Stettin, 15 cks.
Antwerp, 49 pks. Wilson, Sons, & Co., Ld.

Colours—
Antwerp, 4 cks. Bailey & Leetham
Bremen, 4 Veltmann & Co.
,, 20 Sissons Brs & Co.
Stettin, 1
Danrig, 4
Rotterdam, 2 Hutchinson & Son
,, 105 pks. W. & C. L. Ringrose
Antwerp, 28 Wilson, Sons, & Co., Ld.
Leghorn, 10 cs. ,,
Marseilles, 12 ,,

Dextrine—
Stettin, 10 bgs.

Dyestuffs—
Alizarine
Rotterdam, 23 cks. W. & C. L. Ringrose
Argols
Bordeaux, 59 cks. Wilson, Sons, & Co, Ld.
Myrabolams
Bombay, 6,830 bgs.
Valonia
Smyrna, 614 t.

Farina—
Ghent, 30 bgs. Wilson, Sons, & Co., Ld.
Stettin, 248
Harlingen, 175 bls. Hutchinson & Son
,, 50 bgs.

Glucose—
Stettin, 35 cks. Wilson, Sons & Co, Ld.
Rotterdam, 60 bgs. Hutchinson & Son

Glue—
Dunkirk, 15 cks. Wilson, Sons, & Co, Ld.
Rouen, 20 bgs. 8 65 cs. Rawson & Robinson

Lithopone—
Amsterdam, 20 cks. Hutchinson & Son
Stettin, 2 cks. Wilson, Sons, & Co., Ld.

Manure—
New York, 5 pks.

Ochre—
Rouen, 6 cks. Rawson & Robinson
Marseilles, 37 Wilson, Sons, & Co., Ld.
,, 68

Phosphate—
Ghent, 81 t.

Phosphorus—
New York, 10 cs. Wilson, Sons, & Co., Ld.

Pitch—
Amsterdam, 13 cks. Hutchinson & Son
Rotterdam, 4 ,,

Plumbago—
Hamburg, 20 cks. Wilson, Sons, & Co., Ld.
Leghorn, 250 bgs.

Pyrites—
Huelva, 1,465 t.

Soap—
Naples, 50 cs. Wilson, Sons, & Co., Ld.
Marseilles, 26 ,,

Starch—
Ghent, 255 cs. Wilson, Sons. & Co., Ld
Bremen, 724 Veltmann & Co.
Antwerp, 8 Wilson, Sons, & Co., Ld.

Talc—
Marseilles, 50 bgs.

Tallow—
New York, 100 tcs. Wilson, Sons, & Co., Ld.
St. Petersburg, 7 pks.

Tartar—
Naples, 19 cks. Wilson, Sons, & Co, Ld.
Marseilles, 2 ,,
,, 1
Bordeaux, 10

Treacle—
New York, 635 brls. Wilson, Sons, & Co., Ld.

Turpentine—
Bordeaux, 15 cks. Rawson &
2 cans Robinson

Varnish—
New York, 6 brls.

White Lead—
Amsterdam, 45 cks. Hutchinson & Son
Antwerp, 23 Bailey & Leetham
Rotterdam, 10 W. & C. L. Ringrose

Zinc Oxide—
Hamburg, 10 cks. Bailey & Leetham
Rotterdam, 25 Hutchinson & Son

GLASGOW.

Week ending August 6th.

Aniline—
Rotterdam, 12 cks. J. Rankine & Son
Hamburg, 4 2 cs.

Barium Sulphate—
Antwerp, 406 bgs.

Barytes—
Rotterdam, 46 cks. J. Rankine & Son
,, 65 pks.

Chemicals *(otherwise undescribed)*
Rotterdam, 9 cs. 2 cks. 21 brls. J. Rankine & Son

Chromium Fluoride—
Rotterdam, 10 cs. J. Rankine & Son

Citric Acid—
Messina, 2 cks.

Colours—
Antwerp, 3 cks. 5 cs.
Hamburg, 5
Rotterdam, 33 pks.

Cottonseed Oil—
Norfolk, 3 brls.

Dyestuffs—
Alizarine
Rotterdam, 178 cks. J. Rankine & Son
,, 90 pks.
Argols
Bordeaux, 60 cks.
Madders
Rotterdam, 1 ck. J. Rankine & Son
Shumac
Palermo, 1,720 bgs. 130 bls.

Glucose—
Philadelphia, 1,100 brls.

Glue—
Rotterdam, 100 bgs. J. Rankine & Son

Lead Acetate—
Hamburg, 13 cks.

Manganese Oxide—
Rotterdam, 4 cks. J. Rankine & Son

Pitch—
Hamburg, 1 ck.

Plumbago—
Genoa, 300 bgs.

Potassium Nitrate—
Hamburg, 48 cks.

Pumice Stone—
Leghorn, 50 bgs.
Messina, 11 cs.

Pyrites—
Huelva, 1,777 t. Tharsis Co.

Soap—
Newport News, 110 brls.

Sodium—
Hamburg, 40 cks.

Sodium Sulphate—
Antwerp, 17 cks.

Starch—
Philadelphia, 100 sks.
Rotterdam, 30 cs. J. Rackl

Sulphur—
Catania, 27 cks. 1,341 b

Sulphuric Acid—
Antwerp, 37 cks.

Talc—
Norfolk, 15 cs.

Tartar—
Bordeaux, 20 cks.

Tartaric Acid—
Hamburg, 15 cks.

Treacle—
Philadelphia, 1,000 brls.
,, 150
Rotterdam, 12 cks.

Ultramarine—
Rotterdam, 1 ck. 4 cs.

Varnish—
Antwerp, 2 cks. 1 dm.

Waste Salt—
Hamburg, 132 t. 50 bgs.

White Lead—
Rotterdam, 49 cks.

Wood Pulp—
Christiania, 443 bls.
Gefle, 4,520

TYNE.

Week ending August

Alum Earth—
Hamburg, 84 cks. Tyne

Asbestos—
Hamburg, 4 bls. Tyne

Barytes—
Antwerp, 300 bgs. Tyne
Amsterdam, 46 cks.

Castor Oil—
Antwerp, 6 brls. Tyne

Glue—
Antwerp, 1 ck. Tyne

Limestone—
Antwerp, 10 cs. Tyne

Phosphate—
Bona, 1,250 t.

Plumbago—
Hamburg, 4 cks. Tyne

Soap—
Rotterdam, 6 cs. Tyne

Sodium—
Hamburg, 1 cs. Tyne

Sodium Nitrate—
Taltal, 10,999 bgs.

Starch—
Rotterdam, 56 cs. Tyne

White Lead—
Antwerp, 34 brls. Tyne

Wood Pulp—
Christiania, 1,040 bls.

GOOLE.

Week ending July

Alizarine—
Rotterdam, 9 brls. 1 cs.

Alkali—
Calais, 16 cks.

Antimony—
Boulogne, 2 cks.

Barytes—
Rotterdam, 24 cks.

Caoutchouc—
Boulogne, 2 cks. 3 cs.

Colours—
Hamburg, 25 cks. 32 cs.
Harlingen, 1

Dyestuffs *(otherwise*
Rotterdam, 301 cks. 72 cs.
Boulogne, 26 1 15

...s —
...burg, 20 bgs.
...szyhl, 490
...se—
...is, 100 bgs.
—
...logne, 1 ck.
...rood—
...ti, 1,075 t.
...aica, 763
...ler —
...erdam, 4 cks.
...sh —
...kirk, 23 cks.

Calais, 49 dms.
Pyrites—
Huelva, 1,321 t.
Saltpetre—
Hamburg, 4 cks.
Rotterdam, 200 bgs.
Soda—
Rotterdam, 36 cks.
Starch—
Ghent, 50 cs.
Waste Salt—
Hamburg, 1,204 cks.
Wood Pulp—
Rotterdam, 52 bls.

GRIMSBY.

Week ending August 1st.

Albumen—
Hamburg, 3 cks.
Barytes—
Hamburg, 7 cks.
Caoutchouc—
Hamburg, 1 cs.
Chemicals *(otherwise undescribed)*
Antwerp, 2 cs.
Hamburg, 14 cks. 1
Colours—
Hamburg, 8 cks. 16 pks.
Rotterdam, 2 102
Antwerp, 20 46 cs. 14
Dyes—
Antwerp, 33 pks.
Indigo—
Rotterdam, 1 cs.
Glue—
Dieppe, 19 cks.
Plumbago—
Hamburg, 1 ck.
Starch—
Antwerp, 86 cs.
Wood Pulp—
Malmo, 800 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 5th.

...i—
...da, 5 c. £9
...on, 1 t. 2 37
...é, 1 15 13
...onia (Liquid)—
...bay, 5 cs. £10
...gne, 25 drs. 235
...l, 16 c. 23
...onium Carbonate —
...hama, 2 t. 10 c. £68
...bourne, 8 cs. 11
...yres, 1 37
...s, 1 28
...onium Chloride—
...enburg, 2 cks. £38
...ica, 3 t. 105
...tantinople, 25 brls. 88
...ey, 7 c. 145
...tz, 12 20
...onium Sulphate—
...gua, 16 t. 15 c. £200
...burg, 130 1,063
...ritius, 410 13 3,895
...drous Ammonia —
...gne. 50 cyldrs. £114
...eldorf, 23 75
...m Nitrate—
...ras, 15 kgs. £15
... York, 2 t. 37
...c—
...ane, 1 t. 4 c. £38
...s, 12 13
...nic Acid Gas—
...ander, 6 cs. £25
...ic Soda—
...town, 3 t. £10
... Cruz, 10 3 c. 93
...pico, 8 10 76
...bourne, 13 12
... Town, 4 5
...er, 12 30
...icals *(otherwise undescribed)*
...erdam, 8 t. 4 c. £106
...ey, 1 cs. 40
...bay, 21 67
...er, 6 21
...ning, 1 ck. 375
...castle, 4 21
...bourne, 2 kgs. 6 2 cs. 3 0
...achee, 1 cs. 50 80
...ndon, 4 37
...ane, 43 2 cks. 5 crts. 10 kgs.
...pks. 189
...kirk, 21 t. 3 c. 1,220
... Acid—
...etersburg, 9 cks. 8 c. 15 kgs. £309
...erdam, 3 cs. 1 t. 5 10 301
...burg, 1 brl. 12 cks. 29 555
...a, 10 63
...i, 2 17 122
...us, 4 30
...castle, 2 12
...aide, 3 19
...nto, 11 63
... Products—
...izarine
...n. 4 cks. £67
...iline Dyes
...bourne, 2 cs. £35
...itta, 1 25
...iline Oil
...erdam, 10 dms. £420
...a, 4 175
...t, 2 cks. 40
... York, 10 drs. 400

Aniline Salts
Genoa, 30 cks. £245
New York, 2 40
Anthracene
Cologne, 510 cks. £2,570
Benzol
Treport, 40 cks. £310
Amsterdam, 6 drs. 64
Hamburg, 10 puns. 160
Carbolic Acid
Paris, 5 cks. £12
Sydney, 20 drs. 18
Philadelphia, 20 cs. 109
Gisborne, 21 pks. 25
Hamburg, 80 637
Creosote
Gibraltar, 32 brls. £10
Naphtha
Treport, 20 cks. 28 brls. £240
Boulogne, 26 75
Melbourne, 10 crates 14
Naphthaline
Rotterdam, 200 bgs. £110
Amsterdam, 52 pks. 44
Treport, 55 50 bgs. 83
Paraffin Wax
Stettin, 50 brls. £60
Pitch
Boston, 1,400 brls. £820
Trinidad, 6 6
Natal, 16 6
Antwerp, 250 t. 400
Alexandria, 900 340
Melbourne. 15 pks. 10
Newport News, 537 bgs. 120
New York, 394 cks 600 brls. 518
Pyridine
Hamburg, 6 cks. £66
Stettin, 3 35
Tar
Algoa Bay, 500 drs. £17
Cologne, 250 cks. 128
Sydney, 100 18
Trinidad, 6 brls. 7
Melbourne, 10 14
Hamburg, 6 20
Coal Products *(otherwise undes.)*—
Sydney, 50 drs. £10
Copper Sulphate —
Bordeaux, 301 13 c £534
Paris, 117 2,122
Canterbury, 1 19
Treport, 9 10 150
Cream of Tartar—
Nelson, 10 c. £52
Brisbane, 10 cs. 54
Fremantle, 1 t. 5 130
Auckland, 11 51
Lyttelton, 5 25
Hobart, 2 10
Adelaide, 10 50
Pt. Elizabeth, 2 cs. 18
Disinfectants—
Auckland 20 dms. £18
Melbourne, 9 cs. 15
Demerara, 4 cks. 17
Antwerp, 30 cks. 150
Hong Kong, 20 56 pks. 172
Hamburg, 1 t. 8 c. 120 82
Natal, 9 16
Pt. Elizabeth, 92 37
Dunedin, 5 kgs. 4 8 62
Guano—
Landerneau, 90 t. £100
Manure—
Penang, 5 t. 12 c. £80
Grenada, 5 14
Cape Town, 6 1 70

Nitric Acid—
Jersey, 20 carboys £40
Phosphate —
Treport, 50 t. £325
S. Kitts, 101 bgs. 23
Phosphoric Acid—
Paris, 13 carboys £87
Demerara, 36 cks. 115
Potash—
M. Video, 8 dms. £13
B. Ayres, 2 t. 3 c. 37
Wellington, 19 47
Potash Crystals—
Brussels, 6 cs. £132
Potassium Chlorate—
Madras, 15 kgs. £30
Potassium Cyanide—
Melbourne, 2 c. £12
Potassium Sulphate—
Mauritius, 25 t £240
Salicylic Acid —
Toronto, 12 cs. £193
Saltpetre —
Gibraltar, 2 t. 10 c. £57
Wellington, 1 23
Hamburg, 1 21
Amsterdam, 2 7 51
Brisbane, 2 43
Bahia, 1 8 31
Rio de Janeiro, 10 7 231
Salts of Lime —
Brussels, 1 cs. £15
Sheep Dip—
B. Ayres 9 t. 17 c. 100 brls. £382
Stanley, F. J., 25 cks. 21
Algoa Bay, 13 8 525
Beira, 5 cs. 13
Soda Alkali —
Rotterdam, 41 t. 17 c. £370
Soda Ash—
Greytown, 2 t. 9 c. £11
Soda Crystals—
Perth, 3 t. 5 c. £8
Nelson, 3 2 8
Newcastle, 25 1 70
Demerara, 1 13 6
Pt. Elizabeth, 2 18 8
Sodium Bicarbonate—
Adelaide, 2 t. £13
Nelson, 2 13
Sodium Carbonate—
Fremantle, 11 t. 14 c. £23
Sodium Silicate—
Greytown, 3 t. 9 c. £10
Sodium Tartrate—
Montreal, 17 c. £46
Stannous Chloride—
Demerara, 7 cks. £120
Strontium Nitrate—
Madras, 17 kgs. £24
New York, 5 t. 13 c. 142
Sulphur—
E. London, 2 t. 4 c. £24
Sulphuric Acid—
Melbourne, 8 cs. £16
Wellington. 4 c. 10
E. London, 1 t. 18 c. 19
Superphosphates—
Lyttelton, 50 t. £143
Tartaric Acid—
Fremantle, 10 c. £68
Lyttelton, 2 13
St. Petersburg, 6 cks. 52
Algoa Bay, 2 kgs. 13

Napier. 2 12
Adelaide, 8 58
Pt. Elizabeth, 3 cs. 22
Nelson, 8 55

LIVERPOOL.

Week ending August 5th.

Alum—
Guayaquil, 17 c. 3 q. £5
Varna, 9 t 15 3 45
Pernambuco, 1 5
Penang, 1 9 8
Singapore, 2 5 13
Syra, 1 5 2 6
Alexandria, 1 1 3 5
Lisbon, 5 25
Montreal, 5 10 27
Aluminoferric —
Boston, 5 t. 2 c. £14
Aluminous Cake—
Melbourne, 10 t. 7 c. 3 q. £42
Ammonium Carbonate —
Hamburg, 1 t. £28
Genoa, 1 8 c. 45
Marseilles, 1 2 35
Ammonium Chloride—
Rotterdam, 8 c. 1 q. £14
Larnaca 2 3
Montreal, 6 10
Genoa, 2 t. 3 17
Barcelona, 1 1 10
Beyrout, 10 17
Galatz, 19 2 38
Ammonium Sulphate—
Bordeaux, 5 t. 1 c. 3 q £43
Valencia, 50 400
Montreal. 10 2
Las Palmas, 46 5 378
Arsenic—
Wellington, 1 t. 5 c. £30
Barium Chlorate—
Genoa, 5 c. £20
Bleaching Powder—
Baltimore, 67 cks. 30 bxs.
Boston, 335
Calcutta, 60 cs.
Genoa, 98
Lisbon. 15
Marseilles, 4
Nantes, 28
Naples, 21
Paris, 10
Boracic Acid—
Melbourne, 2 t. 10 c. £80
Rotterdam, 1 2 33
Borax —
Gothenburg, 1 t. £20
Cape Town, 5 c. 1 q. 5
Bilbao, 6 1 6
Hamburg, 1 6 28
Vera Cruz, 1 13 1 33
Rotterdam, 15 16 2 313
Ancona, 11 11
Barcelona, 10 17 1 217
Melbourne, 2 39
Mollendo, 9 9
Stockholm, 9 2 9
Calcium Chloride—
Melbourne, 5 t. £12
Sydney, 1 3 c. 3
Carbolic Acid—
Rotterdam, 7 t. £339
Larnaca, 40 dms. 21

N. Orleans, 5 13 c. 270
Hamburg, 3 11 230

Carbon Bisulphide—
Para, 4 c. £5

Caustic Potash—
Melbourne, 5 t. 1 c. £130
Havre, 2 3 70
Baltimore, 2 16 80

Caustic Soda—
Bahia, 70 dms
Baltimore, 70 50 brls 50 bxs.
Barcelona, 70 90
Beyrout, 8
Barranquilla 20
Bilbao, 226
Catania, 65
Cienfuegos, 28
Fairwater, 35
Galatz, 15
Genoa, 178
Hamburg. 165 5
La Guayra, 20
Leghorn, 108
Libau, 104
Lisbon, 529
Malaga, 140 15
Manila, 100
Melbourne, 133
M. Video, 50
Montreal, 35 pks.
Naples, 50
Newcastle, 68
Newfairwater, 35
N. Orleans, 50
New York 50 500 kgs. 31 cks.
Oporto, 30
Penang, 90
Perth, 15
Puerto Cabello, 10
Quebec, 30
Kangoon, 15
Rotterdam, 44
Samarang, 40
San Sebastian, 105
Savanilla, 12
Seville, 231
Smyrna, 30
Stettin, 69
Trinidad, 7
Tarragona, 30
Valencia, 30
Venice, 50

Chemicals *(otherwise undescribed)*
Genoa, 1 t. £35
Galatz, 2 1 c. 71
Piræus, 2 3
Gutujewsky, 5 650
Philadelphia, 13 15 449
St. Petersburg, 2 10 290
Hamburg, 10 15
Odessa, 6 14 2 q 193
Bombay, 7 10 262

China Clay—
Bombay, 484 cks.
Boston, 1,820 140 bgs.
Rio de Janeiro, 56

Chloroform—
B. Ayres, 2 cs.

Citric Acid—
Vera Cruz 1 c. £6

Coal Products—
Aniline Colours
Bordeaux, 1 ck.
Anthracene
Rotterdam, 18 t.
Creosote Salts
Rotterdam, 10 t. 10 c. £211
Naphthaline
Antwerp, 10 t.
Pitch
Lagos, 5 brls.
Tar
Philadelphia, 150 brls.
Sierra Leone, 5 cs.

Copper Sulphate—
Galatz, 1 t. 5 c. £23
B. Ayres, 5 15 91
M. Video, 10 6 2 q. 176
St. Nazaire, 5 2 79
Rio de Janeiro, 9 16 163
Rouen, 4 19 87
Barcelona, 5 84

Copperas—
Syra, 4 t. 17 c. 3 q. £8
Larnaca, 1 8 5
Rio. 1 18 1 5
Malta, 3 7 6

Gypsum—
New York, 36 t. 1 c. £126

Magnesia—
Barcelona, 7 cs.
B. Ayres, 1 ck.

Magnesium Carbonate—
Vera Cruz, 6 c. £6

Magnesium Chloride—
St. Nazaire, 10 t 4 c. £25

Magnesium Sulphate—
Palermo, 1 t. 10 c. £6
Rio de Janeiro, 150 kgs.

Naphthaline Salts—
Antwerp, 10 t. £25

Oxalic Acid—
Boston, 6 t. 15 c. £216

Paint—
Alexandria, 9 cks.
Antwerp, 16 kgs.
Bahia, 10 cs. 20 5 brls
Bathurst, 34
Brisbane, 24
Calcutta, 66 dms.
Callao 2
Cape Town, 20
Curacao, 50
Gibraltar, 80 pks.
Gd. Bassam, 34
Hamburg, 25 cs. 2 7 3
Hong Kong, 20 4 tcs.
La Libertad, 10 brls.
Las Palmas, 109
Manaos, 1 brl. 4
Manila, 297 dms.
Melbourne, 12 cs.
M. Video 12
Nagasaki, 240
Port Natal, 313
Rio de Janeiro, 2 t. 5 c.
Tripoli, 92 kgs 6
Valencia, 4 cs.
Vera Cruz, 9

Painters' Colours—
Akassa 20 kgs.
Bathurst, W.C.A., 40
Bombay, 31 cks. 1,113 kgs. 25 brls.
Boston, 1 cs. 4 6 kgs
B. Ayres, 100 15 35 brls.
Gothenburg, 100 bgs.
Lisbon, 1
Manaos, 23
Montreal, 6 t. 15 c.
Newport News, 103 cks.
Para, 2 20 dms.
Philadelphia, 15
Port Natal, 24
Ponce, 4 brls.
St. John's, N'fld., 62 kgs. 12 dms.
San Juan, 20 7 brls.
Sapelli, 24 cs.
Sierra Leone, 19
Talcahuano, 4 55 6
Valparaiso, 200 cs.

Paraffin Wax—
Odessa, 312 bgs.
Paris, 10 cs.

Phosphorus—
Hiogo, 10 c. £120

Potash—
Callao, 1 c. 1 q. £5

Potassium Carbonate—
Baltimore, 15 t. 4 c. £282

Potassium Chlorate—
Oporto, 1 t. 1 c. £43
Corunna, 1 40
Gutujewsky, 10 368
Antwerp, 4 5 178
Trieste. 9 20
New York, 41 5 1,629
Newfairwater, 5 196
Genoa, 1 40
Hiogo, 14 15 575
Sydney, 11 454

Potassium Prussiate—
Naples, 5 c. £22
Barcelona, 1 t. 1 92

Potassium Silicate—
Malta, 1 t. £5

Salt—
Antwerp, 117 t.
Bilbao 50 cs.
Boston, 220
B. Ayres, 25 4 c.
Calcutta, 2,880
Cape Mount, 5
E. London, 9
Ghent, 200
Gibraltar, 2
Gd. Bassa, 19 16
Halifax, 120
Iquique, 15
Lagos, 100
Manaos, 92 13
Melbourne, 25
M. Video, 60
Montreal, 297
Newcastle, 29
New York, 50
Para, 386 8
Philadelphia, 400
Pt. Natal, 35
Rosario, 34
Salt Pond, 22 10
Santos, 100
Shediac, 250
Sierra Leone, 50
Warri, 5
Winnebah, 5

Saltpetre—
Pernambuco, 5 t. 14 c 1 q. £130
N. Orleans, 3 7

Satinite—
Calcutta, 3 t. 11 c. 2 q. £10

Sheep Dip—
Odessa, 2 t. 5 c 2 q £72

Soap—
Abonnema, 300 bxs
Addah, 26
Akassa, 62
Alexandria, 10 74 cs.
Algoa Bay, 58
Amsterdam, 100
Antwerp, 1,800
Appam, 175
Bakana, 150
Barbadoes, 550
Bathurst, W.C.A. 530
Bombay, 36
B. Ayres, 6 brls.
Calcutta, 10
Callao, 6
Cape Town, 100
Constantinople, 1 0 1 pk.
Drewin. 125
E. London, 750
Genoa, 10
Gibraltar, 392 25
Guadeloupe, 750 bdls.
Hamburg. 250 3
Havre, 170
Hong Kong, 609
Iquique, 300
Lagos, 2 6 dms.
Macassar, 1,000
Madras, 10
Malta, 120
Manaos. 250
Monrovia, 40 4
M. Video, 1
Montreal, 1,180
Mossel Bay, 1,110 10 bdls.
New York, 100 85
Old Calabar, 800
Opobo, 400
Para, 100
Pt. Natal, 1,205 5
Pt. Elizabeth, 50
Rotterdam. 400
St. John's, N'fd. 322
St. Thomas, 252
San Juan, 100
Sherbrooke, 1
Singapore, 116
Smyrna, 68 20
Teneriffe, 390
Trinidad, 540
Valparaiso, 110

Soda—
Bombay, 4 brls.

Soda Alkali—
Genoa, 35 brls.
Leghorn, 37
Melbourne, 17

Soda Ash—
Adelaide, 57 cks.
Baltimore, 17 120 bgs
Boston, 28 tcs. 605
Dunedin, 114
Genoa, 100
Gothenburg. 22
Hamburg, 300
Leghorn, 50
Madeira, 2
Melbourne, 164
M. Video, 100 brls.
Montreal, 20 20 tcs. 100
N. Orleans, 22
New York, 147 1,200
Oporto, 9
Philadelphia, 36 63 400
Piræus, 20
Rio de Janeiro, 55 100 brls.
Samarang, 78
Santander, 16
Smyrna, 1,450
Sydney, 251

Soda Crystals—
Malta, 50 cks.
Philadelphia, 416 brls.
Quebec, 50 120 kgs.
Seville, 25
New York, 15 t. £67

Sodium Bicarbonate—
Adelaide, 50 kgs. 120 bgs.
Antwerp, 30
Barcelona, 150
Bordeaux, 95
B. Ayres, 222 cks.
Canterbury, 20
Cape Town, 40
Dunkirk, 7
Dunedin, 310
Fairwater, 100
Hamburg, 4 9
Libau, 68 3
Lille, 50 7
Lisbon, 40
Montreal, 175
Newfairwater, 100
New York, 2
Paris, 235 7
Pasages, 100
Rotterdam, 145
Seville, 50
Stettin, 1
Sydney, 70
Syra. 20
Valencia, 110

Sodium Borate—
B. Ayres, 10 cks.

Sodium Carbonate—
Bombay, 26 dms.
Boston 50 brls.
Rotterdam, 50

Sodium Chlorate—
Stettin, 2 cks.
Rotterdam, 20 kgs.

Sodium Hyposulphite—
Pacasmayo, 40 kgs.

Sodium Prussiate—
Naples, 4 cks.

Sodium Silicate—
Bilbao, 20 brls.
Malta, 4
Newcastle, 3
Oporto, 66 cks.
San Sebastian, 33

Sodium Sulphate—
Hamburg, 5 brls.

Starch—
Bathurst, W.C.A., 2 cs.

Strontia—
Hamburg, 259 t. 13 c.

Sulphur—
Boston, 200 t. 5 c.
Philadelphia, 125 2
New York, 12

Superphosphate—
Las Palmas, 10 t.
Rostock Town, 699

Turpentine—
Arecibo, 1 brl.

Varnish—
C. C Castle, 5 dms.
Manila, 25 1 cs.
M. Video, 30

Zinc Chloride—
Bombay, 4 t. 11 c.

Zinc Crystals—
Barcelona, 6 c.

MANCHESTER

Week ending August 5th.

Ammonium Sulphate—
Rouen, 200 bgs.

Aniline Colours—
Hamburg, 2 cs.
Antwerp, 4 cks. 1
Rotterdam, 1

Aniline Salts—
Rotterdam, 4 cks.

Anthracene—
Rotterdam, 263 cks.

Benzol—
Rotterdam, 30 dms.

Bleaching Powder—
Rio de Janeiro, 6 cs.

Carbolic Acid—
Treport, 5 cs.

Caustic Soda—
Rio de Janeiro, 8 dms.

Copper Sulphate—
Helsingfors, 10 cks.

Copperas—
Bussorah, 176 brls.

Extracts—
Rouen, 1 ck.

Glue—
Antwerp, 10 cks.

Logwood—
Bombay, 20 bgs.
Rouen, 10 cks.

Magnesium Sulphate—
Bombay, 259 bgs.
Mineral White—
Rio de Janeiro, 19 bgs.
Oxygen—
Treport, 105 tubes
Painters' Colours—
Bombay, 2 cks. 5 cs.
Soap—
Treport, 134 cs.
Soda—
Rio de Janeiro, 2 brls.
Sodium Bicarbonate—
Treport, 24 kgs.
Sodium Binarseniate—
Rouen, 1 ck.
Sodium Sulphate—
Bombay, 50 bgs.
Stannate of Soda—
Rouen, 5 cks.
Sulphuric Acid—
Rio de Janeiro, 27 cs.
Tallow—
Rotterdam, 8 cks. 1 brl
Tar Oil—
Antwerp, 10 cks.
Tar Salts—
Hamburg, 48 cks.
Rotterdam, 17
Toluol—
Rotterdam, 29 cks. 20 dms.

HULL.

Week ending August 1st.

Alkali—
Abo, 2 cks.
Bergen, 4 dms.
Constantinople, 100
Benzol—
Amsterdam, 24 cks.
Bleaching Powder—
Danzig, 109 cks.
New York, 139
Trieste, 65
Caustic Soda—
Antwerp, 16 kgs.
Bari, 55 dms.
Danzig, 35
New York, 400
Chemicals (*otherwise undescribed*)
Alexandria, 12 cs.
Antwerp, 22 cks.
Amsterdam, 1
Copenhagen, 1
Catania, 2
Christiania, 12 4 15 pks.
690 slbs.
Constantinople, 60 1
Drontheim, 12
Fiume, 10
Gothenburg, 1 15
Hamburg, 2 1
Konigsberg, 24
Libau, 20
Messina, 25
New York, 40 30 50
Odessa, 20
Rotterdam, 62 40
St. Petersburg, 8
Stockholm, 5
Stettin, 12
Cottonseed Oil—
Antwerp, 906 c.
Amsterdam, 550
Bremen, 270
Copenhagen, 200
Christiansand, 35
Drontheim, 33
Danzig, 17
Gothenburg, 100
Hamburg, 715
Harlingen, 98
Rotterdam, 841
Rouen, 102
Stavanger, 34
Stettin, 100
Creosote—
Antwerp. 50 brls
Dyestuffs (*otherwise undescribed*)
Hamburg, 1 cs.
New York, 21
Rotterdam, 5
St. Petersburg, 15 cks.
Glue—
Amsterdam, 10 bgs.
Ghent, 20
Linseed Oil—
Aalesund, 7 c.
Antwerp, 100
Amsterdam, 155
Bergen, 120
Bremen, 35
Copenhagen, 52
Christiansand, 69
Christiansund, 41
Christiania, 299
Drontheim, 163
Fiume, 66
Hamburg, 717
Stavanger, 41
Manure—
Dunkirk, 10 t.
Stettin, 2,000 bgs.
Abo, 1,150
Painters' Colours—
Antwerp, 59 cks. 3 cs. 12 dms.
161 pks.
Abo, 50
Bergen, 50 100
Bremen, 2
Copenhagen, 18 5
Christiania, 1
Constantinople, 85 pks.
Drontheim, 20 dms.
Dunkirk, 2
Fiume, 5
Gothenburg, 27 1
Ghent, 1 pk.
Hamburg, 42
Harlingen, 4
Konigsberg, 15
New York, 95 321 dms.
Odessa, 70
Rotterdam, 24 1
Riga, 30
Rouen, 2 pks.
St. Petersburg, 80 1
Stockholm, 25 1
Stettin, 29
Trieste, 35
Uleaborg, 2
Pitch—
Antwerp, 85 t.
Plumbago—
Ghent, 25 brls.
Pyridine—
Amsterdam, 13 brls.
Salt—
Reval, 322 bgs.
Starch—
Copenhagen, 35 cs.
Tallow—
Antwerp, 181 cks.
Dunkirk, 41
Rotterdam, 39
Stockholm, 15
Tar—
Amsterdam, 11 cks.
Bergen, 5
Bremen, 5
Christiania, 14
Drontheim, 5
Danzig, 2
Dunkirk, 24
Hamburg, 7
Rotterdam, 2
Stettin, 8
Toluol—
Rotterdam, 25 brls
Treacle—
Wasa, 30 brls.
Varnish—
Antwerp, 3 cks. 2 cs.
Copenhagen, 2
Christiania, 1
Ghent, 1
Hamburg, 1
Rotterdam, 2
St Petersburg, 3
Stockholm, 1
Waste Salt—
Stettin, 100 bgs.

GLASGOW.

Week ending August 6th.

Alum—
Canada, £70
Ammonium Sulphate—
Hamburg, 50 t. 12 c.
Valencia, 308 6¾
Venice 9 19½
Bleaching Powder—
Calcutta, 98 t. 17 c.
Borax—
Rotterdam, 1 t. 1 c.
Chemicals (*otherwise undescribed*)
Egersund, £
Coal Products—
Creosote
France, £260
Creosote Oil
U.S.A., £60
Danzig, 21 t.
Pitch
U.S.A., £200
Gothenburg, 90
Aviles, 1,794
Tar
Calcutta, £45
Danzig, 392 t. 12 c.
Tar Oil
Hamburg, 2 t. 7 c.
Extracts—
Barcelona, £40
Coburg, 27
Gelatine—
U.S.A., £261
Linseed Oil—
Cape Town, 1 t. 18 c.
Natal, 1 3¼
B. Ayres 18 1½
Paint—
Algoa Bay, £31
Calcutta, 120
E. London, £29 11s.
Singapore, £275
Yokohama, 50
Painters' Colours—
Bombay, £111
Calcutta, 140
Cape Colony, qty.
Cape Town, ,,
E. London, 13
Natal, 32
Amsterdam, 32
Paraffin Wax—
Arendal, £42
Barcelona, 194
Fiume, 108
Spain, 160
Valencia, 45
Venice, 39
Cape Town, 86
Potash Salts—
Delagoa Bay, 6 t. 4 c.
Sheep Dip—
South America, £139
Soap—
E. London, 1 t. 8 c.
France, 893 4
Tallow—
Rotterdam, 116 c
Treacle—
Algoa Bay, 3 t. 2½ c.
Cape Colony, 2 9
Christiania, 3 17½
E. London, 1 10
Gothenburg, 19 15¾
Varnish—
Trieste, £20
White Lead—
Bombay, 37 t. 16 c.

TYNE.

Week ending August 1st.

Alkali—
St. Petersburg, 31 t. 6 c.
Bergen, 2 19
Savona, 23 5
Hamburg, 1 12
Alum Waste—
Odense, 9 t 7 c.
Alumina Sulphate—
Barcelona, 1 t. 2 c
Copenhagen, 1 4
Antimony—
Hamburg, 2 t.
Antwerp 2
Copenhagen, 2 2 c.
Arsenic—
Copenhagen, 9 c.
Barytes—
Hamburg, 5 t. 1 c.
Bleaching Powder—
Riga, 35 t. 19 c.
St. Petersburg, 23 5
Ergasteria, 1 1
Lisbon, 20 1
Gothenburg, 24 18
Horsens, 1 10
Rotterdam, 16 10
Abo, 14 12
Hamburg, 10 13
Antwerp, 29 1
Copenhagen, 8 13
Carbolic Acid—
Rotterdam, 5 t. 13 c.
Caustic Soda—
St. Petersburg, 21 t. 19 c.
Barcelona, 47 8
Lisbon, 4 18
Gothenburg, 4 18
Leghorn, 10 3
Hamburg, 46 15
Antwerp, 15 19
Copenhagen, 6 19
Linseed Oil—
Ergasteria, 12 c.
Litharge—
Hamburg, 2 t. 13 c.
Copenhagen, 2 16
Magnesia—
Barcelona, 8 t.
Leghorn, 1 8 c.
Lisbon, 10
Hamburg, 11
Antwerp, 2
Paint—
Rotterdam, 10 c.
Hamburg, 10
Antwerp, 10
Paraffin Wax—
Barcelona, 5 t.
Plumbago—
Ergasteria, 4 c.
Soda—
River Plate, 18 t. 12 c.
Gothenburg, 3
Savona, 8
Leghorn, 30 19
Rotterdam, 10
Helsingfors, 10
Abo, 43 10
Wiborg, 5 9
Smyrna, 32 10
Soda Ash—
Gothenburg, 8 t. 11 c.
Helsingfors, 40 6
Sodium Sulphate—
Riga, 5 t. 9 c.
Antwerp, 50 2
Sulphur—
Gothenburg, 83 t.
Helsingfors, 9 c.
Superphosphate—
Riga, 719 t. 17 c.
White Lead—
Copenhagen, 9 t. 19 c.

GOOLE.

Week ending July 29th.

Alkali—
Antwerp, 12 cks.
Rotterdam, 1
Benzol—
Rotterdam. 23 cks.
Coal Products (*otherwise undes.*)—
Hamburg, 37 cks.
Rotterdam, 109
Dyestuffs (*otherwise undescribed*)
Ghent, 3 cks.
Hamburg. 55 bgs
Rotterdam, 2 3 cs.
Manure—
Dunkirk, 200 bgs.
Hamburg, 181
Painters' Colours—
Amsterdam, 500 bgs.
Antwerp, 1 ck.
Boulogne, 5 cs.
Calais, 4
Dunkirk, 18
Harlingen, 20
Rotterdam, 4
Soap—
Ghent, 1 cs.

GRIMSBY.

Week ending August 1st.

Alkali—
Antwerp, 5 cks.
Hamburg, 20 cs.
Chemicals (*otherwise undescribed*)
Rotterdam, 30 dms.
Savanilla, 5 cs.
Coal Products (*otherwise undes.*)—
Dieppe, 37 cks. 2 cs.
Hamburg, 4
Painters' Colours—
Antwerp, 1 ck.
Dieppe, 1
Hamburg, 9 1 pk.
Rotterdam, 12
St. Thomas, 58

PRICES CURRENT. WEDNESDAY, AUGUST 12TH

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities m

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. ..per cwt.	5	9 &	8/9
,, Glacial.. .. .. ,,		40/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	10	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B.. .. .. per lb.	0	0	2¾
,, =24° B.. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate.. .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &		35/-
,, Nitrate.. .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4¾
,, Sulphate (grey) London .. .. .. per ton	7	17	6
,, ,, (grey) Hull .. .. ,,	7	15	0
Aniline Oil (pure) .. .. per lb.	0	0	9¾
Aniline Salt ,, ... ,,	0	0	8¾
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide).. .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to		65/-
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	11	0	0
Chromium Acetate (crystal).. .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to		30/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	3	9
,, 50/90 ,, ... ,,	0	2	9
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	2	2
Creosote (ordinary).. .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	11
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston.. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	5
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	47	17	6
,, Sulphate .. .. ,,	16	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°).. .. .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	2	6
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	15	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton			
,, ,, (grey) (ex ship .. .. ,,			
Magnesium (ribbon and wire) .. .. per oz.			
,, Chloride (ex ship) .. .. per ton			
,, Carbonate .. .. per cwt.			
,, Calcined Magnesia .. .. per ton.			
,, Sulphate (Epsom Salts) .. .. .. per ton			
Manganese, Sulphate .. .. ,,			
Borate .. .. per cwt.			
,, Ore, 70 % .. .. per ton			
Methylated Spirit, 61° O.P. .. .. per gallon			
Naphtha (Wood), Solvent .. .. ,,			
,, ,, Miscible, 60° O.P .. .. .. ,,			
Oils:—			
Cotton-seed .. .. per ton			
Linseed .. .. ,,			
Petroleum, American .. .. per gallon			
Stearine .. .. per ton			
Phosphorus (yellow) .. .. per lb.			
,, (red) .. .. ,,			
Potassium (metal) .. .. per oz.			
,, Bichromate .. ..nett per lb.			
,, Carbonate, 90% (ex ship) .. .. .. per ton			
,, Chlorate .. .. per lb.			
,, Cyanide, 98% .. .. ,,			
,, Hydrate (Caustic Potash) .. 90 % .. per ton			
,, ,, (Caustic Potash) 75/80 % .. ,,			
,, ,, (Caustic Potash) 70/75 % .. ,,			
,, Nitrate (refined) .. .. per cwt.			
,, Permanganate .. .. per cwt.			
,, Prussiate Yellow .. .. per lb.			
,, Sulphate, 90 % (ex ship .. .. .. per ton			
,, Muriate, 80 % (do.) .. .. .. ,,			
Silver (metal) .. .. per oz.			
Sodium (metal) .. .. per lb.			
,, Carb. (refined Soda-ash) 48 % ..nett per ton			
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,			
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,			
,, ,, (Alkali) 58 % .. .. .. ,, ,,			
,, ,, (Soda Crystals) .. .. .. ,, ,,			
,, Acetate (ex-ship) .. .. ,,			
,, Arseniate, 45 % .. .. ,,			
,, Chlorate .. .. per lb.			
,, Borate (Borax).. .. .. net, per ton.			
,, Bichromate .. .. ,, per lb.			
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton			
,, ,, (74 % Caustic Soda) ,, ,, ,,			
,, ,, (70 % Caustic Soda) ,, ,, ,,			
,, ,, (60 % Caustic Soda) .. ,, ,,			
,, ,, (pure liquor 90° Tw.) .. ,, ,,			
,, ,, 77/78 % powdered (99 % hydrate) ,,			
,, Bicarbonate .. .. ,,			
,, Hyposulphite .. .. ,,			
,, Manganate, 25 %.. .. .. ,,			
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.			
,, Nitrite, 98 % .. .. per ton			
,, Phosphate .. .. ,,			
,, Silicate (glass) .. .. per ton			
,, ,, (liquid, 100° Tw.) .. .. .. ,,			
,, Stannate, 40 % .. .. per cwt.			
,, Sulphate (Salt-cake) .. .. per ton.			
,, ,, (Glauber's Salts) .. .. ,,			
,, Sulphide .. .. ,,			
,, Sulphite .. .. ,,			
Strontium Hydrate, 100% .. .. ,,			
Sulphocyanide Ammonium, 95 % .. .. per lb.			
,, Barium, 95 % .. .. ,,			
,, Potassium .. .. ,,			
Sulphur (Flowers) .. .. per ton.			
,, (Roll Brimstone) .. .. ,,			
,, Brimstone: Best Quality .. .. .. ,,			
Superphosphate of Lime (26% .. .. ,,			
Tallow .. .. ,,			
Tin Crystals .. .. per lb.			
,, English Ingots .. .. per ton			
Zinc (Spelter) .. .. ,,			
,, Chloride (solution, 100° Tw.) .. .. .. ,,			

THE

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AND

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TENDER.

BOROUGH OF WIDNES.

E Corporation invite Tenders for the purchase of
om 600 to 700 tons of GAS TAR from their Gas-Works, for the Twelve
ending September 30, 1897.
s of Tender, and conditions of Contract, may be obtained from Mr. ISAAC
Assoc. M. Inst. C.E., Gas-Works, Widnes.
ers, endorsed "Tar," to be delivered to the undersigned not later than the
t.
ighest or any Tender not necessarily accepted.

H. S. OPPENHEIM,
Town Clerk.

Hall, Widnes,
g. 15, 1896.

TENDER.

ADCLIFFE AND PILKINGTON GAS COMPANY.

TO TAR DISTILLERS.

E Directors of this Company invite Tenders for
he purchase of 700 tons of the surplus TAR, to be produced at their Works
liffe during the Twelve Months commencing the 1st day of October next.
culars may be obtained from the undersigned, to whom endorsed Tenders
delivered not later than Tuesday, the 1st day of September next.

JAMES BRADDOCK,
Manager and Secretary.

Works, Radcliffe,
g. 20, 1896.

E ADVERTISEMENT.

BE SOLD—20 tons each of Nitre and Salt Cake
7s. 6d. per ton, delivered at Macclesfield Station.—Apply to E. EATON,
in-street East, Macclesfield.

Advertisements.

aid Advertisements of Situations Vacant, Premises on Sale or To be Let
laneous Wants, and Specific Articles for Sale by Private Contract are
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30 Words and under ..... 2s. 0d. per insertion
Each additional 10 words ..... 0s. 6d.

ertisements of Situations Wanted are inserted at one-half the rates when prepaid, viz.:—

30 Words and under ..... 1s. 6d. per insertion.
Each additional 10 words ..... 0s. 3d. "

e Advertisements, Announcements in the Directory Columns, and al Advertnts not prepaid, are charged at the Tariff rates, which will be forwarded on ion.

THE MODERN ANANIAS.

IT is well known that the expert takes the highest place in the American judge's classification of liars. Much allowance must be made for the exaggeration necessary to heighten the flavour of the jest; but, unfortunately, in this instance the jest is like those of Jack Point, and if you "winnow, winnow, winnow all the folly from the fun, you'll "find a grain of truth among the chaff."

Even though in this familiar classification experts hold such an unenviably eminent position, a still further classification is necessary, as there are degrees of comparison even among experts, as a body.

Thus, while in the class as a whole there are many grades, it also stands to reason that they must represent numerous and widely different branches of industry.

There is scarcely another question to which so many contradictory answers would be given as to that of—What is an expert? and it may well be asked. At the first blush it appears a very simple question to answer, but further consideration opens up many points which must be taken into consideration if a universally applicable and trustworthy definition is to be given.

It may be as well, therefore, before going any further, to take the official utterance, as it were, of the dictionary. As the result we find the general definition to be that of "one instructed by experience," also "one who has skill, experience, or extensive knowledge in his calling or in any special branch of learning." The legal definition, however, is of a less general tone, and while conveying the aspect which is most familiar to our readers, it at the same time imposes a higher standard of efficiency. It describes the expert as "a specialist in a particular profession or department of science, requiring for its mastery peculiar culture and erudition."

This definition is followed by a rider which conveys a great deal, since it not only necessitates qualification in a high degree but also the exercise of the greatest care and discretion in all that is done by an expert in his capacity as such. It is to this effect: Such specialists may be witnesses in matters as to which ordinary observers could not, without such aid, form just conclusions. In this capacity they are liable for negligence in case they injure another from want of proper qualifications, or *proper care* in the *exercise* of their speciality.

It will thus be seen that the calling is an honourable one, pre-requiring high attainments, and should be indissolubly associated with the peculiar dignity and repute which is compatible with its requirements.

That this is not the state of things at present is only too well known. Of the many the most familiar to the public are the mining, scientific, and engineering experts, while there is also another *genus* which the public ought to know well by this time, only they don't—the expert humbug.

In our columns this week there is a telling, and, we believe, truthful description of one of the latter species which infests the

ranks of mining experts. This particular branch of the profession has, for obvious reasons, suffered most from the ravages of these pests, and the result should impress on the other offshoots the extreme importance of resolutely discountenancing all that is discreditable.

We take it for granted that as far as our brethren—the chemical experts—are concerned, they have hitherto never wavered from the path of rectitude, but that is no reason why we should not urge, and urge them again, to make it impossible for judges to make remarks such as those which recently fell from Mr. Justice Wills.

Of course the public are prone to scoff, without considering the particulars of a case. For instance, in a recent dispute heard in the Lancashire Court of Chancery, the witnesses gave the lie to each other, while the experts agreed on the whole. This was because the conditions related by the witnesses were observed at different times, when, as the Vice-Chancellor subsequently stated in his judgment, at one time there was no nuisance and at another there was. He likewise concluded that at the time the proceedings were instituted there was no ground for the court to interfere, because the defendants were eager and the plaintiffs equally reluctant that he should visit the place whence the nuisance was alleged to proceed.

In a case of this kind where it would possibly be excusable for differences in expert evidence to arise, some allowance must be made, though of course it would never do for experts to gather information and samples in the same reckless manner as did some of the ordinary witnesses. Strictly speaking, it should be impossible to obtain sound expert evidence in such a one-sided case, as all competent judges would be of one mind, and, therefore, unable to give contradictory evidence. But we are all human, and we are only pleading for a reasonably perfect and practical code of expert ethics.

Under circumstances similar to those we have just indicated, too much blame must not be attached to the expert, but when there are obvious evidences of laxity and blindfold procedure, it is quite another tale, and it is on this point in particular, rather than the delicate question of qualification, that we would invoke chemical experts to scrupulously wield their forces; and by unstintingly expending their energies, leave undone nothing that will redound to the credit of their profession and themselves.

It is a lesson which should be laid to heart when a public personage like Mr. Justice Wills is enabled to talk about the nonsensicality of coming before him with samples taken by ignorant people, out of places not chosen by those who were going to conduct the analyses, with the result that on what purported to be two comparative samples, the figures of one expert came out ten or twelve times worse than those of the other. It is not a case of qualification, here, at all. Capability is not questioned, but it is very desirable that there should also be no questioning on the score of negligence and its responsibilities, as set forth in the rider to the legal definition—that is, if the chemical expert is to cut a creditable figure in this case.

The adverse influence of this kind of procedure is not limited. It does harm to one and all, and if not speedily checked can only end one way. It brings the chemical profession into disrepute, and creates an undesirable precedent, since Mr. Justice Wills ignored the evidence in this case—for sound reasons it is true—but there is a danger of this plan growing in favour among justices, simply from force of habit and prejudice. In consequence, expert evidence will grow to be looked on as a thing to be endured during the hearin the case, but ignored in giving judgment. And what bec of the experts? Since one destroys the value of the o they become merely corresponding factors in an equa and can, therefore, be cancelled in solving the pro Not a very desirable prospect.

We admit the matter presents difficulties, but we thin just one of those things that the Institute of Chemistry to take in hand. Nothing can be more derogatory t "dignity of the profession" than cases of this kind suggest a code of ethics to meet this and similar diffic —which are real and operative—would be helpful, a more beneficial than wasting its energy seeking to sub and control members on points which at the best are matters of opinion and nothing more.

STATE OF THE CHEMICAL TRADES.

THE glass trade is reported as being good in the Wear an districts. The chemical trade is steady, and white lead are busy. Cement is improving. The salt trade at Middlesb neighbourhood is steady. At Barrow paper and pulp makers ar At St. Helens and Liverpool district the chemical trade is slack, the glass trade is a little better. The salt trade at Winsfo Middlewich is quiet. In Hull and district the seed-crushing m stopped, or else working short time There is considerable acti the paint and colour trades, however, and overtime is being wo a good many cases. The dyeing trade is reported as moderate Northampton district. Around Dudley the glass trade is good, new furnace has been started. The bottle section is rather quie ever. At Wolverhampton, chemical works and tar distiller fairly busy. The chemical works in the neighbourhood of Rual Flint are finding plenty of employment, but in South Wa chemical trade is dull. There is fairly well doing in patent fuel silver and copper smelting keeps steady.

PREPARING PLATINO-CYANIDES.—Since the advent of R rays additional interest attaches to these fluourescent comp The following method of preparation is described by A. Sch the *Berichte*. Platinum chloride is precipitated by hydrogen s at 60° to 70°C, and the well-washed platinum sulphide is disso a warm solution of potassium cyanide. On evaporation, the pot platino-cyanide ($K_2Pt(CN)_4$, $3H_2O$) crystallizes out, and equal p potassium sulphide and potassium thiocyanate remain in the liquor. If a solution of barium cyanide be used, the barium p cyanide is obtained. With commercial potassium cyanide, con large quantities of sodium cyanide, Schertel obtained the b double salt ($KNaPt(CN)_4$, $3H_2O$) described by Martius.

THE SANITARY INSTITUTE.—The preliminary programme fifteenth Congress, to be held in Newcastle-upon-Tyne from Sep 2nd to 9th, has now been issued. The president of the Con the Right Hon. the Earl Percy, P.C., D.L., J.P. The meeting Congress will consist of three general addresses and lectures. sectional meetings dealing with (1) sanitary science and pre medicine, presided over by Prof. W. H Corfield, M.A., M.D. F.R.C.P.; (2) engineering and architecture, presided over Andrew Noble, K.C.B., F.R.S., M.I.C.E; (3) che meteorology and geology, presided over by W. H. Dines, F.R Met.Soc. Five special Conferences: Port sanitary auth presided over by Arthur Holt-Barker, Chairman Port of L Sanitary Authority; medical officers of health, presided over by Hill, M.D., F.R.S.E, F.I.C., F.C.S.; municipal and county eng presided over by Francis J. C. May, M.I.C.E; sanitary insp presided over by George Reid, M.D., D.P.H.; domestic hygien sided over by the Mayoress of Newcastle-upon-Tyne. Concu with the Congress, a health exhibition will be held, and H.R.H Duke of Cambridge, K.G., who is president of the institut graciously consented to perform the opening ceremony. Exc to places of interest in connection with sanitation will be arrange these and the other local arrangements are in the hands of an ini local committee presided over by the Mayor of Newcastle, wi H. E. Armstrong, medical officer of health for the city, and Dr Hembrough, medical officer of health for Northumberland, as ho secretaries. It appears from the programme that over 160 auth including several County Councils, have already appointed deleg the Congress, and, as there are also over 1 800 members and ass in the institute, there will probably be a large attendance in a to the local members of the Congress.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Natural Fertilizer. C. Fell. 17,151. August 4.
Improved Active Material for Accumulator Plates. S. Hammacher. 17,161. August 4.
Explosives, containing Saltpetre. M. Bielefeldt. 17,204. August 4.
Ozone Apparatus. A. Verley. 17,228. August 4.
Alkaline Cyanides. V. Beauquet. 17,243. August 4.
Nitro-glycerine Explosives. C. E. Bichel. 17,317. August 5.
Storage Batteries. F. F. E. Heyse and W. H. Akester. 17,346. August 6.
Chemical Products from Raw Wool and Fat. C. Schmidt. 17,379. Aug. 6.
Dyeing Soap C. Uffelmann. 17,382. August 6.
Feeding Cakes. Lever Bros., Ltd., and J. W. Hope. 17,405. August 6.
Reducing Lead Scum or Litharge. J. Williams, senior. 17,474. August 7.
Evaporating Solutions of Salts. A. Kumpfmiller and E. Schultgen. 17,488. August 7.
Artificial Fuel. H. C. B. Forester. 17,514. August 7.
Water Softening Apparatus. C. H. Fitzmaurice and E. Mann. 17,526. August 7
Coating Aluminium with other Metals. E. Edwards. 17,604. August 8.
Centrifugal Pumps for Acid Liquids. W. and F. Marsh. 17,529. Aug. 8.
Hydrochloric Free from Arsenic. J. R. Wylde, J. W. Kynaston, and J. Brock. 17,607. August 8.
Electro-deposition of Zinc. Cowper-Coles Galvanising Syndicate, Ltd., and S. O. Cowper-Coles. 17,608. August 8.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Manufacture of Carbon Anodes for Electrical Processes. P. Jensen, 77, Chancery-lane, London. Eng. Pat., 13,521. June 12, 1896.

The wear and tear of the carbon anodes used in electrolysis is a matter of considerable importance, for various reasons. Cost is one, and the contamination of the electrolyte by particles of carbon as the anode gradually disintegrates is another. The life of the anodes depends largely upon whether they are made from gas carbon or not, and also upon the intensity of the current. It has been found that the simple expedient of thoroughly saturating the anodes with paraffin wax overcomes these difficulties. There are a number of other substances that answer equally well. By such a treatment the anodes are preserved without losing their conductivity. Moreover, it is claimed that after this treatment a current of greater density can be used with carbon of inferior quality, that otherwise would be quite useless. The process answers equally well with either natural or artificial charcoal.

Improvements in the Manufacture of Paints and Pigments. S. B. Schryver, 11, Taviton-street, Gordon-square, London. Eng. Pat. 13,973. July 23, 1895.

The pigment resulting from the process described by the patentee, though equally suitable for the preparation of enamel paints, is specially suited for the basis of an anti-fouling composition. The pigment essentially consists of ter-sulphide of arsenic and sulphur. Sulphur and slaked lime are boiled together with water until a clear liquor is obtained. Arsenic is then added, and the boiling continued until a yellow solution results. The whole is then allowed to cool, and hydrochloric acid added, when a yellow pigment is precipitated, which is filtered off and washed.

Improvements in the Production of Glycerine and Caustic Soda from Soap Lyes. J. Glatz, 485, Kent-avenue, Brooklyn, and O. Lugo, 187, John-street, New York, both in U.S.A. Eng. Pat. 10,837. May 19, 1896.

In achieving the object set forth in the title, the spent lyes are treated electrolytically. Zinc or carbon electrodes are used, preference being given to carbon. The lyes are passed through a long trough, fitted with baffling walls, and containing a number of anodes. The cathodes are placed in compartments with porous walls, containing water. The lye being decomposed by the current, the sodium is attracted to the cathode, where it is oxidized and combines with the water to form a solution of caustic soda. At the same time the glycerine is set free. An additional claim is that the albuminoid matters are rendered insoluble, the colour of the lyes being changed from a dark-brown to a light straw yellow, while the glycerine set free is transparent. The insoluble matters are filtered off, and the clear liquor distilled, giving pure glycerine free from all discolouration.

An Improved Soap or Cleansing Agent. H. W. Wilson, of Wilson Bros., Ltd., Todmorden, Lancashire. Eng. Pat. 12,953, June 17, 1896.

In the preparation of a cleansing soap in which the detergent powers are assisted by attrition, sawdust or its equivalent is incorporated in the soap. The product has the advantage of floating, and is claimed to be specially efficient for scouring paint, glass, and household effects, and removing the accumulations of grimy occupations.

Reports of Companies.

ALUMINIUM COMPANY, LTD.

In moving the adoption of the report at the recent ninth ordinary general meeting of the company, Sir H. E. Roscoe, F.R.S., expressed the regret which he said they must all feel at the absence of their chairman, Mr. Gerald Balfour, M.P., and at the fact that he had felt it necessary to resign the chairmanship of the company, though he would still continue to aid them by retaining a seat at the board. Their ordinary business at Oldbury had resulted satisfactorily, and the profits had exceeded those of the preceding year, but it was to the sales of patents, for which the company was indebted to the inventive genius of Mr. H. Y. Castner, that they owed £33,523. out of their total realised profits of £50,681. But beyond this they had shares of the nominal value of £119,000., which he thought was no more than their actual market value. Their net profit for the year, including amount brought forward, was £40,079. After careful consideration the directors decided upon recommending a dividend of 15 per cent., writing £10,000 off works, and a like sum off patents, carrying forward £11,079. This of itself secured a future dividend, and put the company in a secure position. Their £12,000. 10 per cent. B debentures had been paid off, and their £100,000 6 per cent. debentures would be liquidated in October partly by the issue of £90,000. 4½ per cent. first mortgage debenture stock, thus reducing the debenture debt by £21,800, and saving £3,363 a year in interest. Their revenue would further be augmented in future by dividends on their holding in the Castner-Kellner Alkali Company; besides which they would receive a fixed royalty of £4,000 a year from the Mathieson Alkali Company, which was erecting large works at Niagara Falls for the manufacture of caustic soda. They also held a large interest in the Niagara Electro-Chemical Company, which should yield a good profit. Altogether their outlook for the future was most promising, and there was every reason to expect satisfactory dividends. They had reason to believe that their sodium patents were being infringed in Germany, and had instituted proceedings with a view of putting a stop to this. Lieutenant-General Sir Andrew Clarke seconded the adoption of the report, which was carried.

A LITTLE KNOWLEDGE, ETC.—A well-meaning contemporary says:—"Aluminium making is profitable. At the ninth general meeting of the Aluminium Company, Limited, a dividend of 15 per cent. was declared, and Sir H. E. Roscoe, who presided, anticipated still better doings in the near future, in spite of the fact that the Company's sodium patents are being infringed—'in Germany,' as usual." The last part is alright and very nice. It is the deduction contained in the first four words that "gives it all away." Our contemporary evidently does not know that the Aluminium Co. *don't make aluminium.*

THE PETROLEUM OUTLOOK.—Messrs Wm. H. Samuel and Co., in their petroleum circular for the season 1896-97, remark:—In former years, when we used to issue our statistical circular to the trade it was possible to form a pretty fair idea of the future course of prices, but since the commencement of importation in bulk by tank steamers, these statistics are no longer obtainable, and it becomes more and more difficult to gauge the future course of prices and make anything approaching a reliable forecast of the market. At the moment the market is firm, and prices, both for spot and forward deliveries, have a hardening tendency, and it is very probable we may see a higher range of prices during the ensuing season. As regards American oil, the great scarcity in production which took place in the spring of last year seems to have been partially at any rate overcome, and the heavy depletion of the visible supply held in the United States at that period is no longer a factor of the situation, supplies being so far this year quite equal to the demand. It must be borne in mind, however, that last season was about the mildest this country has witnessed for the past five and twenty years. As regards Russian oil, the situation during the ensuing season will, we think, be guided in a great measure by the quantity of refined burning oil that may be available for distribution. There is only one line of transit between Baku, the seat of production and refining on the Caspian Sea, and Batoum, the port of exportation on the Black Sea, and breakdowns on this line (which have frequently occurred) have stopped the supply for several weeks together. Again, the quantity of Russian refined burning oil imported into the United Kingdom, obtained from a given quantity of Russian crude, is only about one-third of that obtained from a similar quantity of American crude.

Official Memoranda.

(From the Board of Trade Journal.)

CUSTOMS TARIFF OF VICTORIA.

The following is a special abstract of customs dues now payable on goods imported into the colony of Victoria, being continued from p. 66 :—

Soda crystals	£2. per ton.
Carbonate of ammonia	2d. per pint or lb.
Glycerine, pure	1½d. per lb.
,, crude	½d. per lb.
Ammonia (liquid)	*Free.*
Nitrate of silver	*Free.*
Fish oil (all sorts, in bulk)	*Free.*

CUSTOMS TARIFF OF BRITISH GUIANA.

The following is an abstract of the dues now leviable :—

	Dols.
Candles, tallow, wax, or compo.....per lb	0 05
Cement.....per barrel of 400 lb.	0·25
Oils (other than gasoline and crude petroleum) flashing below 73° Abel .....per gallon	3·00
Crude petroleum (with sanction of Govnr. in Council) ,,	0 05
Oils (including gasoline, and excepting medicinal and essential oils) .....per gallon	0 25
Paints and pigments.....per cwt.	0·25
Pitch.....per barrel	0·50
Rosin ..... ,,	0·50
Saltpetre ..... per lb.	0·01
Soaps and soap powders, and toilet ..... ,,	0·02
,, other kinds..... ,,	0·00½
Methylated spirits, naphtha, &c.....per gallon	0·50
Stearine.....per lb	0·01½
Tallow and anti-friction grease, &c. ..... ,,	0 01
Tar ..... per barrel	0·50
Turpentine, crude..... per gallon	0·50
,, spirits of ..... ,,	0·18
Paraffin wax and mineral wax ..... per lb.	0·02
Whitening (except as manure) ..... ,,	0 00½

The following articles are admitted *duty free* :—

Animal charcoal	Manures, including sodium,
Lime (all kinds)	nitrate, and whitening
Salt	

CONSTRUCTION OF A PETROLEUM PIPE-LINE TO BATOUM.

A communication, has been received at the Foreign Office from Her Majesty's Consul at Batoum, stating that a sum of 50,000 roubles has been transferred from St. Petersburg to the treasury at Tiflis, for the purpose of meeting the expenses to be incurred by the Ministry of Ways and Communications, in carrying out surveys for the construction of a pipe-line for the conveyance of kerosene from the station of Mihailovo, on the Trans-Caucasian railway, to Batoum.

The above-mentioned amount is also to cover any sums required for drawing up an estimate of the cost of constructing the pipe-line in question.

VANILLINE EXTRACTION.

According to M. Dolabaratz a new process consists of drying the vanilla in an hermetically closed vessel by means of chloride of calcium, in the proportion of about one kilog. for every kilog. of dried vanilla obtained. One lot of chloride of calcium is sufficient for several processes if kept, after regeneration, in an hermetically closed vessel.

According to information received, 2·981 kilogs. of raw vanilla will produce about a kilog. of prepared vanilla.

It can be easily understood that vanilla dried in an air-tight vessel must loose much less vanilline than when dried by the ordinary process, by which it is exposed in the open-air for several weeks.

OTTO OF ROSES IN BULGARIA.

The *Economiste d'Orient* states that according to reports from Kezanlik the state of the rose gardens is satisfactory. If the weather continues to be favourable up to the time of distillation, and if it be cool at the time of final operations, the crop will be 40 per cent. better than that of last year.

CONTINENTAL ACID VESSELS.

IN the large chemical works on the Continent a very successful use has for some time been made of vessels, tanks, and other articles which are made of so-called "compound" plates of iron and lead, or copper and lead, both metals being joined to each other in a perfectly homogeneous manner, after a patent process.

Lead linings of the usual kind mechanically applied to iron vessels to protect them against the attack of acids, will, under the influence of a high temperature, buckle and form blisters after being used for a very short time, and then the lead lining will tear by its own weight.

The advantage of these homogeneously lead-covered vessels consists in the fact that the two metals are chemically joined to each other in such a thorough manner that, under the ordinary variations of tension and heat occurring during working, they will both undergo exactly the same changes of form as a solid mass, whereas in the ordinary lead-lined vessels the two metals are allowed to slide on each other in the proportion of their different rates of expansion.

Homogeneously lead-covered vacuum apparatus have come into special favour, and also copper coils covered on the outside with lead. These replace lead coils in evaporating apparatus, as they have a much longer life, and give a better heating effect.

In comparison with vesse's made of lead only, the iron or copper vessels homogeneously covered with lead offer the advantage that they work under any pressure, that the dead weight is decreased, and the lead will last much longer, as it has only to resist chemical action, whereas the purely mechanical influences and strains are taken up by the copper or iron.

When, in 1889, the first vessels of this class were offered to the public, they met with a good deal of distrust, and it was only after very exhaustive researches and tests, made at the Royal Technical Laboratory, Berlin (the highly satisfactory results of which were afterwards submitted to the public in pamphlet form), that manufacturers themselves made trials with these vessels, and obtained such results as have led to their general adoption in practice.

To-day, after years of experience with these vessels, Continental chemical manufacturers have ceased to doubt the high practical value of this invention, the success of which may now be considered an accomplished fact.

The vessels in question are being introduced into this country by the firm of Alfred Wenner, 32, Oxford-street, Manchester. They are made in any desired shape or form, and samples and test vessels are sent on application.

JAVA INDIGO.

MESSRS. BUNGE AND CO., of Rotterdam, report that the dull tone, which prevailed for some time in the trade in general, has not been without influence on the indigo market. The prospects for the new Bengal crop, though very bad in the spring, improved somewhat, and the favourable prospects for the Oude crop put the total of the estimates up to about 130,000 maunds, a quantity, which, although far below that of last year, might be considered sufficient if compared with the two large crops of 1894 and 1895 Java indigo has remained pretty much unchanged in so far as the fine qualities are concerned, but good middling and ordinary middling have gradually declined, a fact which, in the long run, will certainly prove in favour of the article. In comparison with Bengal, Java is not dear at present, and this circumstance has already provoked more attention on the part of consumers.

It is possible that we shall soon see an important difference between ordinary and fine indigos of all origins, the Oude crop being very large, and the estimates of Tirhoot and Bengal remaining not less than 40,000 maunds below those of the past year, or 60,000 against 100,000 maunds. The latest reports from Bengal are again alarming. There is every reason to expect that the slightest revival of trade in general will lead to an improvement of business in Java indigo.

ARBITRATION IN THE CHEMICAL TRADE.—A dispute between the United Alkali Company and Messrs. Bowman, Thompson and Co., Lostock, near Northwich, has just been settled by arbitration. In the autumn of last year an agreement was entered into between the two firms named and Messrs. Brunner, Mond, and Co., with a view to keeping up prices. (*C. T. J.* 433. p. 144.) A clause was inserted under which the United Alkali Company were to sell the chemicals made by Messrs. Bowman, Thompson and Co. Instead of removing the products as they were manufactured, the United Alkali Company caused the Lostock firm to stock large quantities. The interpretation of the clause was the matter under dispute, and the result is that the United Alkali Company have been called upon to sell the accumulated stock.

Parliamentary Jottings.

WATER IN BUTTER.

In the House of Commons, last week, Mr. Oswald asked the President of the Local Government Board whether, in view of the fact that on 29th July, 1896, the magistrates sitting at Royton, near Oldham, convicted and fined a grocer and provision merchant for selling butter containing 20·49 per cent. of water, the magistrate stating that over 16 per cent. of water was avoidable; and, in view of the fact that the report of the Select Committee on Food Products Adulteration of this session reported (page 28) that any standard for water under 20 per cent. would be unfair to the producers of butter, and that the question of a standard for water in butter was not free from difficulty, and having regard to their proposal for the constitution of a court of reference, whether the Local Government Board would issue circulars giving directions to local authorities to suspend further prosecutions with regard to water in butter not fraudulently added until the question of the standard for water in butter had been definitely settled by Parliament. Mr. Oswald said he wished to add that the committee referred to did not think it necessary to make any recommendation on the question of the standard for water in butter.

Mr. T. W. Russell: My right hon. friend has not yet been able to consider the report of the Food Products Adulteration Committee, but hopes to do so during the recess. Pending its consideration it will not be possible to issue any circular such as the hon member suggests. It is true that the committee did not make any recommendation with reference to water in butter. They thought that was better left to the court of reference which it is proposed to set up.

Mr. Oswald: As this is a matter of great importance to the trade, I wish to ask if the right hon. gentleman will receive any representations from the trade on the subject during the recess?

Mr. Russell: We shall be glad to receive any representations.

BILLS PASSED.

The following Bills have received the Royal assent:—Telegraph Money, Locomotives on Highways, Coal Mines Regulation Act Amendment (No. 2), and the Truck Act.

THE ITALIAN SULPHUR TRUST.

As we have already indicated under the heading of "New Companies," a large company—the Societa Anglo-Siciliana—has been formed with a capital of one million, half of which is to be paid up at once. In view of the long-continued crisis in the sulphur-producing districts of Sicily, caused by over-production, and resulting in low prices for brimstone, the objects of the Company are threefold, namely, to ensure to the producers an advanced price, fixed for a term of years; also to fully control the output and market of all Sicilian sulphur, and to secure large profits.

The principal movers in the matter are Baron Oppenheimer, a prominent Paris banker; Commander Florio of the Florio Steamship Company, Palermo, Sicily; and Alexander M. Chance of Birmingham.

The company was to be definitely organised when as many of the Sicilian producers as produce four-fifths of the annual output should have signed articles of agreement. The company is to remain in force for the term of five years, with privilege on the part of the company of renewal for five years longer.

In these contracts with the producers the company becomes the sole purchaser of all the products of the signers, and it is stipulated that the company shall have the right to dictate a decrease of production, up to 18 per cent, should the annual output exceed the demand.

The producers are guaranteed by the company for the term of five years, for brimstone, best seconds, unmixed, on board at Sicilian ports, at the fixed price of £3. 5s 6d. (at present rate of exchange) per ton.

The producers are also to receive the benefits of the abolition of the export duty recently decreed by the Italian Parliament.

The company, of course, will regulate the export prices, and thereby expects to reap large profits.

Mr. Chance, of Birmingham, reserves to himself, in the agreement between the members of the company, the privilege of manufacturing with his method 40,000 tons annually of "recovered brimstone."

It would seem necessary that the company, in order to have everything their own way, would also have to get control of the pyrites, but in this they may fail, and it is not certain, as yet, that they will be entirely successful.

While some parties seemed to be doubtful as to the possibility of getting all the producers of four-fifths of the production to sign the contract, others expressed themselves as confident that the distressed mine owners and producers would gladly avail themselves of the apparent opportunity to better their condition. And this they appear to have done. As a direct effect of this movement, the prices of brimstone have advanced during the last three weeks, and if the prospects of the company continue to prosper, will doubtless continue to rise. On the other hand, should it fail to convert all the producers and mine owners (for in some of the mines many different parties are interested, hence the difficulty), the result might be an immediate drop to even lower prices than were ruling before. In the contract with the producers it is stipulated that the company, when ordering a decrease of product, must pay to the producers 1 per cent. extra for every 3 per cent. reduction of output dictated.

IMPORTS AND EXPORTS FOR JULY.

Though the Board of Trade returns for last month are satisfactory as a whole, there are some points affecting the chemical trades which are less so. The imports of oil were less. In the exports, chemical products are lower in value. In alkali there is a drop of 139,000 cwts., the United States only taking 136,000 cwts, as against 235,000 cwts. With regard to glass, paper, soap, and rubber manufactures, things are better, the values in each case being higher than in the same month last year.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.	Quantities. 1895.	1896.
Margarine ..... Cwt.	73,801	64,128
Copper Ore and Regulus..... Tons.	19,063	23,401
Pyrites..... ,,	57,660	47,820
Tin ..... Cwt.	71,984	49,044
Alkali ..... ,,	11,913	8,477
Brimstone ..... ,,	24,320	51,820
Dyes, Coal Tar ..... £.	61,129	64,483
Saltpetre ..... Cwt.	16,713	40,827
Petroleum ..... Gall.	13,002,126	13,558,795
Turpentine ..... Cwt.	83,822	93,141
Guano..... Tons.	6,758	324
Nitrate of Soda ..... ,,	7,622	9,051
Paraffin ..... ,,	47,667	52,081
Rosin ..... Cwt.	161,002	186,358
Tallow and Stearine..... ,,	172,280	194,584
Oil Seed Cake ..... Tons.	30,669	30,531
Wood Pulp..... ,,	25,764	35,379

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1895.	1896.
Alkali ..... Cwt.	501,595	351,753
Cement ..... Tons.	40,621	32,600
Coal and Coke ..... ,,	3,362,398	3,131,019
Copper, all kinds ..... Cwt.	82,045	64,552
Iron and Steel ..... Tons.	280,762	326,991
Chemical Manures ..... ,,	34,077	37,228
Oils, seed ..... ,,	3,573	4,285
Salt ..... ,,	68,953	60,154

Proposed New Colonial Sugar Beet Factory.—A meeting has been held to discuss a proposal to establish the beet sugar industry at Port Fairy, Australia. In explanation of the project, Mr. Van der Velde said he wished to secure the practical co-operation of the farmers, as he saw the possibility of obtaining the capital required if he could get guarantees that the necessary acreage of beets would be grown to keep the factory employed. In New South Wales the Government had given the industry practical assistance in distributing seed to farmers free of cost, and had offered prizes to ensure its successful cultivation. This season the Government of New South Wales was importing two tons of the best French seed for free distribution. If the required number of farmers who would grow roots could be found, a factory could be erected for the season of 1898. The contract would be for five years, and the minimum area under beets would be 1,500 acres. In reply to questions, Mr. Van der Velde said that the bad seed distributed by the Victorian Government last season was purchased in Melbourne at the last moment. Practical knowledge in the cultivation of sugar beet was necessary, and to encourage the industry he was prepared to offer £100 in prizes for the experimental cultivation of the beet. Though sufficient money for the erection of the works could be got outside the district, it was required that the farmers would take a practical interest in the company, and be represented on the board. After some discussion it was resolved that a committee be formed to ventilate the question of sugar beet in the district, and that meetings of farmers be held to endeavour to secure guarantees for the cultivation of the specified area.

TIPS FOR TRADERS.

The increase of the GERMAN EXPORT TRADE with Belgium is noteworthy. Her Majesty's Consul at Frankfort reviewing the progress, points out that the main exports of Germany to Belgium last year consisted of *coal and coke*, 10 400,000 met centners; *metals and oils*, 13 750,000 met. centners; *iron*, 1,500,000 met. centners. The textile and cloth industry ranks first as to value, viz , 36,000,000 marks Then follows the *chemical industry*, with 15,400,000 marks, the *iron industry* with 15,300,000 marks; *paper industry*, 5,600,000 marks During the last year there was an especially favourable development in the export of *rubber goods, aluminium and nickel-plated goods, leather, paper, half-silk goods, soap and perfumery, coal, coke, fire-proof stones, tiles*, and *lead*.

Dealing with the INDUSTRIES OF THE TRANSVAAL, M. Aubert, the French Consul at Pretoria, states that the industries of the Transvaal are as yet comparatively little developed; but there are distilleries, breweries, *manufactories of Portland cement*, and of preserves and jams at Pretoria, a foundry and a *manufactory of cyanide of potassium* at Johannesburg, several machine-repairing establishments and manufactories of carriages, waggons, furniture, carpets, &c. Moreover, the dynamite company has set up at Modderfontein, near Johannesburg, *four factories of dynamite, two of sulphuric acid, one of nitric acid*, &c. There are also workshops for the repair of railway material at Pretoria employing 250 workmen, and the establishment founded by Siemens and Halske of Berlin at Johannesburg which is to supply *electric power* to the motors and dynamos of the mines of the Rand.

THE RESOURCES OF FORMOSA are not to be despised. Considerable quantities of coal and *sulphur* are exported annually. Camphor is, of course, the staple product. Capitalists may be interested to note that every industry in Formosa worthy of the name is still in an undeveloped stage, the manufacture of *camphor, sugar*, and *indigo*, which latter also grows abundantly, being most defective, and the prospects for each and all are very bright. *Gold*, though not found very extensively, is still worth attention, as it is of excellent fineness The assay of some genuine nuggets proved phenomenal.

TARIFF CHANGES.

Among the more recent changes in Tariffs and Customs Regulations are the following: —

METALLIC OXIDES, sulphides, chlorides, bromides, iodides, cyanides, alloys and amalgams with a few exceptions are admitted *free* of duty into Norway.

ALCOHOL to be made into vinegar when imported into Belgium has been granted relief from excise duty at the rate of 36 francs. A relief of 64 francs has been also accorded to alcohol to be used for making hats, varnish, aniline dyes, and fulminates.

COMPRESSED GAS CYLINDERS, and iron or steel vessels containing liquid carbon dioxide and other compressed gases, are now classed as "Frigorific Apparatus," weighing less than 250 kilogs., in accordance with the recent decision of the French Customs

EPSOM SALTS imported into Roumania are now dutiable at 7½ Bani per 100 kilogs. (100 Bani equal 1 franc, 100 kilogs. are about equal to 2 cwt)

BONE DUST imported into the U.S.A. is subject to a duty of 25 per cent. *ad valorem* under par. 352 of the Act of August 28th, 1894.

ESTIMATION OF SULPHUR IN PYRITES.

WHAT we should think is about the last word in the controversy that has been carried on by Messrs. Lunge and Gladding has been communicated to the "Journal of the American Chemical Society" by Dr. Lunge. Mr. Gladding's last remarks were given in this *Journal*, 470, p. 388, where references to the earlier stages of the discussion are given. Dr. Lunge now replies as follows:—It has taken Mr. T. S. Gladding six months to reply to my last paper on the above subject. I will not take much more than six days from the date of receiving the May number the Journal before dispatching my final reply to that gentleman.

Mr. Gladding avoids any mention, and of course offers no refutation, of the charges I had brought against him, but he again puts me into a totally false light, by saying that I "attempt no further support of my position by chemical experiment." This suppresses the fact that I had referred to my more than sufficient experimental proof for Mr. Gladding's and his assistants' inability to handle my process, which has been in daily successful use by scores, if not hundreds, of chemists for a number of years past, and is that employed in Fresenius' own laboratory, as I hear from his son-in-law and laboratory chief, Dr. Hintz Mr. Gladding now exacts a further reply from me, more especially on the strength of some new comparative tests of what he states to be main point at issue, namely the necessity of a very slow addition of barium chloride.

I am convinced that readers are as tired of this dispute as I but as some of them might construe my silence into the admission Mr. Gladding is right on this point, and might saddle themselves a totally unnecessary complication in their daily work, I will not shi further reply, although I think it unnecessary after having gi already in March, 1895, eleven experiments by entirely indepen chemists, refuting all Mr. Gladding's assertions.

In his former paper Mr. Gladding states that the error caused the rapid addition of the barium chloride solution is from two-te to three-tenths per cent. of sulphur, and according to his last pap is even one-half per cent He appeals to independent chemist settle this discrepancy between his statements and my own I h taken this up in the following manner: I instructed one of my as ants, Mr U Wegeli, a skilled worker, but entirely ignorant of above dispute, to make a series of very careful tests of a sampl pyrites, just arrived for analysis and relating to an important c mercial case. I enjoined him to give me absolutely unvarnished sults (which in our laboratory it would not have been at all neces to say), and I told him, as we must be quite sure of the matter, must not merely employ all the ordinary precautions, but also try t the usual quick addition of the barium chloride and a process rece very much recommended, namely, the very slow addition of precipitant; I did not express any opinion of my own upon that p and left it entirely for him to find out what there was in the matter. had just then to undertake a short journey, and on my return he han to me the following results: —

A. *Quick* addidition (*i.e.*, pouring in the hot barium chloride s tion in about ten portions, occupying about half a minute in all. stirring the mixture all the time, as every chemist would do).

1. 39 83 2. 39·65 3. 39 65 per cent. sulphur.

B. *Slow* addition from a burette, one drop per second (exactly described by Mr. Gladding).

4 39 63 5. 39 69 6. 39·44 per cent.

This means: In Nos 2 and 3 the quick addition has given identi results with the slow addition in Nos 4 and 5 No. 1 shows a l more, No. 6 a little less I have suppressed nothing, and I give th results as well, although they are evidently not as reliable as the o four, entirely concordant, results; but even if we admit the reliable results, in striking an average, we find a difference of only tenth per cent. between the quick (39 71) and the slow (39·59) proc Such a difference is evidently within the limits of ordinary experime error.

That both sides may be fairly represented, it is desirable to add in the number in which Dr. Lunge's reply appeared, the follow statement is communicated by Mr N J. Lane, which must be ta for what it is worth: —

Some months ago, before hearing of the controversy between Lunge and Mr Gladding, some experiments were made on this subj the results of which sustain Mr. Gladding's case. The determinati were made on nearly normal sulphuric acid to establish its stren with the following results: —

	Barium chloride added suddenly.		Barium chlori added by drop
1. Sulphuric acid	50·03	....	49·23
2 ,, ,, ...	49·90	....	49·32
3. ,, ,, ...	50·14	....	—

And the average of several practically identical titrations on C sodium carbonate gave sulphuric acid 49 33.

The above results were obtained with the greatest care, and ev precaution used to insure accuracy. This, in my opinion, conclusi proves the accuracy of Mr. Gladding's statements.

THE DECLINE IN ALKALI EXPORTS.—There is a serious decr in the exports of alkali. Last month the shipments were 351,753 cw or 140,000 cwts. less than the corresponding month of last year. T diminution is mainly attributed to the falling off of the trade to United States, owing partly to the condition of business and partl the increased manufacture there. The decrease has continued several months.

THE NITRATE MARKET —Messrs G. C Dobell and Co., of Li pool, report that after prolonged negotiations the combination o mittee have now definitely decided upon the maximum quantit nitrate of soda to be shipped from Chili up to the end of March n This leaves only 675,000 tons, from 1st August to 31st March, 227,000 tons less than during same period last year. Shippers are v firm for forward delivery, 8s 6d. being the figure asked for Octo November shipment; several cargoes being sold at a trifle under t Those best able to judge are of opinion that this article is in for exciting time during the next nine months.

ONE TYPE OF MINING "EXPERT."

THE following particulars throw a strong light on the means by which some reports on mining properties are obtained. Investors are prone to take all and everything in a company prospectus as "jannock" if the statements are duly illuminated by the frequent use of the word "expert." A timely caution is to be found in the following, which is vouched for by a correspondent of the *Australian Mining Standard*. He remarks:—"A year ago, in a certain hotel, I met a man (a Dutchman) who used to haul wood for me. He was dressed in the highest style of English mining expert toggery; an expert pick at his hip; yellow leggings, candle-grease all over his back and sleeves. When I met him, I astonishedly called out, 'Hello, Charley! What are you doing here, dressed up in this style?' 'Sh, Mr. W——, don't gif me avay. I's a minik exbert now. I makes me lots of gash!' And he put his hand in his breeches pocket and pulled out a fist-full of notes and gold. 'Dat is de stoof! Will you take a seegar?' Of course I roared. This man is a piano-maker by trade. He came to Australia in 1871, took up a bit of land near the town where I live, and made his living by raising hay and potatoes, and hauling firewood to the town He, however, went West with the first rush, got into a 'show,' and sold out for cash to an English Company, and is now a full-blown 'mining expert.' He has quite an influence, too; but the humbug can't tell a piece of ore from a chestnut, and doesn't know what a forebreast is, and couldn't tell you for his life where the brake on a hoisting engine is Yet he gets a big sum for a mine examination, *and a bigger one if it floats*. (The italics are ours) The report he gets some poor devil who can write well to concoct for him. There are bushels of his sort round these parts." It is mainly the money of English investors that "feeds" these rogues, and the investing public will do well to ponder long on all the meanings conveyed by our italicised words. How success in flotation can enhance the value of an "expert's" report on a mining property is to us a point fraught with much that is significant, and teeming with Machiavellian innuendo.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for month ending June, 1896, as compared with 1895:—

ALKALI.

Port.	1895.	1895.	1895.	1896.
	Cwts.	Cwts.	£	£
Russia	23,391	19,887	7,647	6,322
Sweden and Norway	14,949	12,198	3,494	2,490
Germany	13,316	11,073	4,214	3,170
Holland	11,413	12,877	2,177	2,233
France	2,908	4,815	1,026	1,699
Spain and Canaries	22,219	31,261	7,849	10,731
Italy	22,209	19,974	7,325	5,500
United States	188,977	144,016	42,711	31,934
Australasia	16,052	17,694	4,642	5,843
British North America	19,540	11,993	4,849	2,989
Other countries	95,181	82,660	28,568	22,072
Total	430,155	368,448	114,502	94,983

BLEACHING POWDER, ETC.

Port.	1895.	1896.	1895.	1896.
	Cwts.	Cwts.	£	£
United States	72,209	58,053	25,954	19,597
Other countries	39,768	44,319	13,906	14,702
Total	111,977	102,372	39,860	34,299

PENNY-IN-THE-SLOT WHEEZES.—The ingenuity that has to be exercised in combating the whiles of those who set themselves to devise means of fraudulently using penny-in-the-slot machines is really surprising. The experience of the South Metropolitan Gas Company with their slot meters confirms this opinion. French pennies were their first trouble. Now the slot meter rejects them A penny fastened to a string and drawn out when the gas was no longer wanted has been met by an arrangement which cuts the string The soapy penny, sticking in the machinery and keeping the gas "on" has also been rendered useless; so that now the company's only anxiety is to be paid before customers remove.

IMPROVEMENT IN ELECTRO-PLATING.

AN invention, which promises to be of great importance to the electro-plating trade, has been brought to our knowledge by Messrs. A S. Smith and Sons, Walsall. Hitherto articles on which a deposit of metal is desired have had to be suspended in the electrolyte by means of wires, and after remaining in the solution for a stated time they have been taken out in a dull or unpolished condition, and subjected to another process for polishing or burnishing them. By this invention, it is claimed, wiring is done away with, and no "moppers" (polishers) are required. What this means as a saving in the cost of plating any practical plater will understand. In addition to this, it is stated, three to four times the amount of work can be turned out in the same time as heretofore. The system, we understand, has been in operation in Messrs. Smith and Sons' workshop for the past seven or eight months. One important advantage is that no interference with the existing arrangements of vats, solutions, or dynamos is involved. All that is required extra is shafting to be placed over the vats, for the purpose of supplying motive power. The process is not suitable for the plating of such articles as teapots, trays, art work, and the like; but as regards 75 per cent of all plateable articles, we are informed, whether the deposition required is of nickel, copper, brass, tin, or zinc, a perfectly bright and lustrous surface is given, with a thicker, more malleable, and more lasting deposit than heretofore by means of the apparatus in question. The articles are placed in large quantities in a revolving hollow container—theoretically there is no limit to the quantity, but practically it may be found advisable not to have more than 90 lb. or 100 lb at a time—and this container is suspended or supported within the electrolytic bath, and during the time the deposition is taking place is subjected to a rotary movement varying from fifteen to fifty revolutions per minute. The container, which is mounted centrally upon a long, insulated metal sleeve, is made of non-conducting material, and its walls are perforated in such a way as to allow the electrolyte to circulate freely through it, and to act upon the work contained therein. The sleeve, with the container carried by it, is fixed to a central metal rod or box, supported by metallic bearing brackets, clothed in wood or other suitable insulating material, and fitted at equi-distant points in its length with copper contact arms These latter are mounted in such a manner as to always be in intimate contact with the articles placed in the container, acting as channels for the passage of the electric current to the negative pole of the generator. The anodes are slung upon their supporting rods around the inside walls of the vat as in the ordinary manner, or in rows to get more anode surface, as the case may require, so that there is nothing in the interior of the container to interfere with the continued rolling movement of the articles placed therein. The electric current is sent through the solution and back to the generator by means of the articles being plated (the cathodes) through the contact arms or their equivalents, and thence through the sleeve and the insulated rod or bar to the negative pole of the generator. Messrs. Smith do not claim for the invention that it does away with the processes preparatory to ordinary plating. To get good results the work has to be prepared at least as carefully as it used to be under the old system, and the more careful this preparation the better are the results. The invention is provisionally protected, and application has been made for full letters patent made in all the principal countries of the world.

Trade Notes.

DAMAGES FOR INTIMIDATION—At the Barrow County Court, recently, a blacksmith sued five other blacksmiths for £50. damages for maliciously inducing or compelling his employers (a naval construction and armaments company) to discharge him. Plaintiff's case was that, as he would not join a trade society, the other blacksmiths in the same employment came out on strike, and they exercised such pressure upon their employers that they were compelled to discharge him. Plaintiff had been in the same employment for 17 years, and his average weekly earnings were £2. 5s a week. In his evidence plaintiff stated that he had been approached by the defendants and asked to join a trade society, but that he declined. The plaintiff was therefore paid off For the defence it was urged that the defendants were actuated by no malicious motives, and that they were only exercising their right to dispose of their labour to the best advantage. The trade unionists who were working in the yard were restricted as to the number of hours they could work overtime, whereas the non-union men were not. Plaintiff admitted that he had worked more overtime than most of the other smiths, and that he had earned as much as £4 in a week, including wages and overtime pay. The Judge held that the act of the defendents was malicious, and that they had conspired to deprive the plaintiff of his legal rights. Judgment for plaintiff. Damages £21.

Price of Paraffin Oil.—The Scotch oil companies have fixed the winter price of burning oil at a halfpenny per gallon under last winter's price. A drop in the price is threatened owing to the severe competition by the Standard Oil Company of America on the Continent. Further particulars are given in this issue in our Report on "West of Scotland Chemicals."

Alarming Subsidence near Northwich.—Early on Monday morning a serious subsidence occurred just outside the town of Northwich, a portion of the Warrington main road being engulphed. A hole thirty feet in diameter and at least sixty feet deep was formed, and for some time vehicular traffic was impeded. The lower part of the cavity quickly filled with water, and cracks for some distance give evidence that a further and greater sinkage is probable.

Cheapening Calcium Carbide.—We learn that a new company, formed at Brussels, by M. Raoul Pictet, for the exploiting of acetylene, is to sell the carbide at 0·40 fr. a kilo This is a considerable reduction from the present price of 0 625 per kilo, but even this is far from the originally named figure of 0·10 fr. The carbide at 0·625 fr. was delivered in a waterproof packing, but we do not yet know the intention of the new society in this respect.

Serious Benzoline Explosion.—Last week, Mr. John Whitworth, painter, Sheriff-street, Rochdale, put his benzoline light in the cellar and forgetting to put out the light, locked the door, leaving no person at home Some time afterwards the lamp exploded and blew out three windows and the front door, and damaged the ceiling and the staircase. Juries should please note that the Americans are trying to force our Government to the conclusion that 10 per cent. of this left in burning oil gives as safe an oil as when removed by fractionation.

New Works at Greenock.—The new distillery to be erected on the extensive site running from Baker-street eastward to Cartsburn-street and having large frontage to Ingleston-street will, it is said, cost close on £50,000. to build and equip, and the erecting will give employment to a large number of tradesmen for a lengthened period. The aluminium works to be erected on the east side of Baker-street will likely be proceeded with at once, and will be fitted up for the making of the carbon necessary to supply the electrical plant at the company's works at Foyers

£2,000 Worth of Refuse.—Two Brooklyn watchcase companies having amalgamated, a new factory has been erected for their accommodation. The old ones, says the Philadelphia *Ledger*, are being pulled down, and trusted employés have been at work scraping the floors and digging the dirt out of the cracks. The scrapings and dirt have been placed in smelters, and gold worth nearly 7,000 dollars has been recovered. The work has not been completed, and the consolidated companies hope to recover gold worth at least 3,000 dollars more before they finish the scraping.

Pollution of the Ship Canal.—At the monthly meeting of Warrington Town Council the Rivers Committee recommended that the attention of the Mersey and Irwell Joint Committee be called to the filthy and offensive condition of the water in the Ship Canal near Warrington, and in the disused portion of the river Mersey at Wilderspool, and that the committee be requested to put into force the powers they possess for suppressing and preventing the pollution of the rivers and streams within their jurisdiction. Councillor Roberts said that he was afraid that the only thing they could do at present was to call the attention of the Mersey and Irwell Joint Committee to the state of the river. The corporation intended to take their filth from the river, and he was glad to see that about fifty authorities and firms had been proceeded against by the joint committee. There was, therefore, a possibility that in a short time the river would be considerably improved. The minutes of the committee were passed unanimously.

"We Want It That Badly."—An ingenious invention, having for its object the abolition of the system of exchanges in connection with the working of the telephone, and the substitution in the rooms or offices of each subscriber of a contrivance whereby he is an exchange in himself, was explained to a number of press representatives last week. The invention, which is the fruits of the ingenuity of M. Apostoloff, and which is to be seen at the offices of the Apostoloff Automatic Telephone Parent Syndicate, at 13 and 14, Abchurch-lane, is as simple as it is ingenious. By combinations, based on the principle of the square root, each subscriber is able personally to place himself in direct communication with any other subscriber of the same wire system in a city without the aid of an exchange employé, and to converse with him at will. Moreover, by the application of the same invention, he is able to place himself in direct communication with several subscribers, and to speak to them simultaneously. This automatic system, it is claimed, does not require any addition to the existing mechanism at the office of the subscriber, except a small attachment called a transmitter or manipulator, which exhibits automatically all the service indications, the approximate cost of which does not exceed £3. 3s.

The Iron and Steel Plant Company, Limited.—We are advised that this company will have an exhibit of stamped steel barrels and drums at stall No. 42 at the Chemists' Exhibition, to be held next week at the National Skating Palace, Argyll-street, W. Special attention is drawn to the type of barrel they have brought out for sulphuric acid, and also to a new 5 gallon drum, which, owing to the "no-rim" principle, is a great improvement on anything now in use.

Worthless Fertilizers.—In his report to the Leicestershire County Council Dr Bernard Dyer, the county analyst, refers to samples of manure sold in the county at £5. 10s. and £4. 1[illegible] respectively, which proved in each case to be worth not more than a few shillings per ton. There was present only 1 per cent. of phosphate of lime, with a very small fraction of ammonia. For most land it would have been scarcely worth a farmer's while to pay carriage and haulage on the material. The substance was sold in the one case as "bone compound," and in the other simply as "manure." In the former case the name was a misdescription, and in the latter, which also in the former, the vendor infringed the Act of Parliament, which prescribes that the invoice shall specify the percentages of the various fertilizing ingredients present The sale of the manure at either £5 or £4 per ton was a gross fraud upon the farmer.

Institute of Chemistry Examinations.—*Examiners*: Professor Percy F. Frankland, F.R.S., F.I.C, and Otto Hehner, F.I.C. The following candidates have passed the Practical Examination for the Associateship. (Under regulations in force prior to October 1st, 1893) Blyth, Meredith Wynter, B.A. (Cantab); B.Sc. (Cambridge University, and registered student under A. Wynter Blyth, Esq., M.R.C.S, F.I.C.; Donald. James Wallace, Glasgow and West of Scotland Technical College; Fry, George Cecil, B.Sc. (Victoria), Yorkshire College, Leeds; Hooton, William Marrs, B.Sc. (Victoria), University College, Liverpool; Muter, Alexander Henry Mitchell, King's College, London, and registered student under Dr. J. Muter, F.I.C.; Ernest Lawrence, B.Sc (Victoria), University College, Liverpool; Turnbull, Robert Hutchison, Glasgow and West of Scotland Technical College; Smith, Harry Metcalfe (for fellowship), University College of Bristol and Cardiff, also with Professor W. Ramsay, F.R.S., and Thomas Stevenson, F.I.C.; Swan, James Robertson, Glasgow and West of Scotland Technical College. *Intermediate Examination*: Collingridge, Frank, B.Sc (London), University College, London; Imire, John, Glasgow and West of Scotland Technical College; Parker, Albert Edward, Mason College, Birmingham. *Final Examination for the Associateship* (In Branch A. Mineral Analysis)—Caspari, Walter Augustus, B.Sc. (Vict.), University College, Liverpool; Hall, Charles Edward, B.A. (Cantab.), Cambridge University, and Dr. A. Dupré, F.R.S, F.I.C; Trantom, William, B.Sc. (Victoria), University College, Liverpool. (In Branch D Organic Analysis)—Mills, Charles, Associate of the City and Guilds of London Institute. (In Branch E Analysis of Water, Food and Drugs): Jackson, [illegible] George, University College, Nottingham *Special Examination in General Agricultural Chemistry, for Fellowship*—Edwards, Vincent, Chemist to the Lawes Chemical Manure Company.

FOREIGN REMITTANCES.

Owing to the inconvenience created by the various ways in which foreign subscriptions are remitted, we respectfully beg to inform subscribers that a *Crossed* Money Order is the most satisfactory method of remitting, both for them and ourselves. In the use of Money Order, a letter advising us of same should always be sent, otherwise, owing to post-office formalities, much delay in tracing and acknowledging foreign remittances is inevitably entailed in this case.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are remarkably firm, and prices continue on the upgrade: 90's stand at 3s. 10½d. for prompt, and the same figure up to Sept.-Dec. delivery; 50-90's are quoted 2s. 10½d. For Sept.-Dec. a halfpenny less, and for Jan.-June, 2s. 9d. Carbolic acid unchanged either as regards price or position. Crude naphtha is steady, at 11d. to 1s., while solvent is dearer, at 1s. 5½d. Pitch little lower, 30s. to 32s., f.o.b. East Coast, now being quoted.

Sulphate of ammonia is lower again, and what business there is seems to find its way North, where prices are very low. The production in Scotland being plentiful, the small current output in England has been sufficient to meet the limited demand. There is no quotation from Beckton. London outside makes stand at £7. 17s. 6d. to £8. 16s. 3d., chiefly the lower; Liverpool £7. 16s. 3d., Hull £7. 15s. and Leith £7. 12s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

re are no changes of any note to report affecting the staple ts of the alkali trade. Prices all round remain steady. Ammonia 58%, £3. 7s. 6d., bags, f.o.r. makers' works, and £3. 15s., casks, Liverpool, etc. For special markets abroad, however, lower are quoted. Bleaching powder unaltered at £6 15s., f.o.r. , for spot and forward delivery; £6. 10s. to £7. per ton for hard-, f o b. Liverpool, etc. Caustic soda continues in fair demand— t quotations are as follows: f.o.b. Liverpool, 77%, £9. 5s.; 8. 5s.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. net per ton, 10-ton id upwards. Chlorate of potash and soda quiet at 4½d. and per lb respectively. Recovered sulphur firm in price at £4. net, f.o.r. makers' works. Sulphate of copper rather easier at 5s, f o.b. Acetates of lime unchanged, and business dull— ions for brown are at £4. net, and grey £8 net, c i f. Potash, and carbonate, in fairly good request, and prices are unaltered. powdered arsenic slightly easier at £22 5s to £22. 10s net., Garston. Yellow prussiate of potash 6½d per lb Cyanide, s 1d. per lb. Sulphocyanides dull.

REPORT ON MANURE MATERIAL.

market has been very quiet throughout the week, there being no vement in any direction. Quotations for mineral phosphates are nged, and U.K buyers are altogether uninterested. For Baltic ontinent there is a certain amount of inquiry for 1897 shipment, great eagerness to operate.

re is nothing reported in River Plate bones, the price asked for ent, £3. 15s. per ton, being no inducement to buyers, whose of value are about £3 12s. 6d. Crushed Kurrachee bones offer . 12s. 6d. per ton, and Bombay bone meal may be had at 5s. per ton for autumn shipment, but the market is very slow.

rate of soda is quiet, and prices for cargoes are barely maintained. ot, however, 8s for fine, and 7s. 10½d. for ordinary quality, are arket values.

THE METAL MARKETS.

NDON, WEDNESDAY.—Pig iron: Scotch warrants closed at 7d.; Middlesbrough, 36s. 8d. cash, and hematite, 46s. 5d. r, steady: Chili bars, G. O. B.'s and G. M. B's., closed at 8s. 9d to £47. 13s. 9d. cash, and £47. 8s 9d. to £47. 13s. 9d. months. Tin, steady: Straits closed at £59 13s. 9d. to £60. cash, and £60. 5s. to £60. 15s. three months; Australian, 10s. English ingots, £63 to £63. 10s. Lead, quiet: sh, £10 16s 3d.; English, £11. Silesian spelter, ry, £17. 5s. Nickel, 1s. 2½d. Antimony, £29. to £29. 10s. silver: First hands, £6. 7s. 6d.; second hands, £6. 5s. 6d. *r shares*, steady: Cape, 2⅜ to 2½; Copiapo, 2⅜ to 2½; la, 2⅝ to 2⅞; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 22½ ⅛; Tharsis, 5⅜ to 5⅝.

ASGOW, WEDNESDAY.—Market firm, with good business. h done at 45s. 6d. and 45s. 7½d. cash, also at 45s. 8d., 9d., and 45s. 8½d. one month; closing with buyers at 45s. 7d. sellers ask 45s. 7½d. Cleveland done at 36s. 10d. one month; g with buyers at 36s. 8d. cash, sellers ask 36s. 8½d. erland hematite done at 46s. 7d. and 46s. 8d one month; g with buyers at 46s. 5d. cash, sellers ask 46s. 6d. Middles-h hematite closes with buyers at 44s. 4½d. cash, sellers ask ; ½d.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

LS.—Palm oil is firm, Lagos in particular being steady, owing to ity. Sales have been made, including Cameroon, at £16 10s, agos at £19. 10s, both transit. There is an improvement in the nd for olive, prices remaining steady. Linseed is quiet, Liverpool s being quoted 17s. 6d to 19s. per cwt., in export casks, according ality. Cottonseed shows little variation, Liverpool refined figuring s. 6d. to 16s. and American 16s. to 16s. 6d per cwt., as in quality uantity. Castor oil keeps very steady, with a fairly good business in good seconds Calcutta at 3⅛d. to 3¼d., and first pressure ch 2 15/16d. to 2⅝d. per lb. Tallow is rather livelier, and business been done both at late rates and also at a slight advance thereon. inquiry from resin continues satisfactory, although prices continue eady as a rock. All grades are equally asked for. Spirits of ntine have quietened down somewhat, and are now steady at 6d. per cwt., with a moderate demand. Petroleum is steady at 5½d. for Russian refined and 6¼d. to 7½d. per gallon for American according to quality.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets remain in much the same positions as a week ago. The changes in linseed oil, however, since then have been many and various, closing at about 5s per ton advance. The import of linseed during the past week has been 6,040 quarters, viz., from St. Petersburg 2,510 quarters, Buenos Ayres 1,936 quarters, New York 1,070 quarters, and Catania 524 quarters. Linseed oil opened firm, and advanced about 15s. per ton on the spot, up to 15s. 10½d. naked having been paid, but the market then commenced to decline again and closes flat at 15s 4½d., spot; September-December offer at 15s. 7½d., January-April 15s. 10½d., and May-August at 16s. 3d. Boiled and refined £1. to £2. per ton extra. Export for the week has been 2,010 cwts. During the week the arrivals of cottonseed have been 1,873 tons from Alexandria and 50 tons from Smyrna. Refined cotton oil remains flat; spot and August-October offer at 13s. 7½d., naked, and 13s. 9d. accepted for Nov.-April, casks £1. and ordinary barrels 30s., per ton extra. Export for the week has been 5,480 cwts Rape oil is firm and in all positions dearer. Olive oil has a tendency to improve in values. Castor oil firm at 2¾d. per lb. for first pressure. Cod oils £17. to £19. per ton Turpentine 19s. 9d. per cwt. Herring oil £13 per ton. Yorkshire wool grease £8. to £9. per ton. Boiled siccative oil £10 per ton. Locomotive grease £10. per ton.

CAKES.—Linseed cakes steady: 95% pure, £5 12s 6d.; oilcakes £4. 12s. 6d., Russians £4. 17s. 6d. to £5. 10s., Americans £4 17s. 6d. Cotton cakes firm: Spot, best makes, £3. 17s 6d. to £4. Rape cakes very scarce: Black Sea £2. 7s. 6d.—quotation nominal.

PAINTS.—Manufacturers continue busy, with firms here and there working overtime. White and red lead unchanged. Dry colours from £3. to £8. per ton. Oxide of zinc unchanged. Black, blue, green, yellow ochre, venetian red, and oxide of iron in oil from £11. per ton. Ready-mixed paints, in tins, from £24. per ton. Paint remover £1. 5s. to £1. 10s. per cwt. Imperial black varnish £5. 10s. per ton, in barrels, free.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical market is practically unaltered, with the exception of sulphur, which is now quoted at £4. 15s. per ton, f.o.b Tyne, in 2 cwt. bags, for prompt. Caustic soda is shipping more freely, and 76/77% is quoted at £9 to £9 5s., and 70% at £7. 10s to £7. 15s. per ton, f.o b. Tyne. Soda crystals remain at £2. 2s 6d. per ton, gross weight, locally.

Bleaching powder, softs, £7. 5s. per ton, nett; hards, £7. 10s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt firm at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues very steady, and there is a good demand for both steam and gas coals Coke is also in good consumption, and price from 14s. 6d. to 15s. 6d. per ton, f o b. Best Northumbrian steam, 8s. 6d. to 8s 9d per ton; second qualities, 7s. 6d. to 7s. 9d. per ton. Small steam 3s. 6d. to 3s. 9d. per ton. Gas coals 6s. 6d. to 7s. per ton. Household coals 10s. 6d. to 11s. per ton. Coke 15s. 6d. to 16s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The market moves steadily, with only a moderate volume of business, but with prices pretty well maintained. Sulphur still holds to the recent firmness and tendency to rise, the quotation being now £4 15s. Sulphate of copper is reported easier, but as yet without any drop of price. The article which gives the least satisfactory account of itself is sulphate of ammonia, which since last report has gone lower than ever before, holders offering to take £7. 11s. 3d., and finding buyers disposed to wait for a lower figure still. Some of the makers, however, take their stand at £7. 12s. 6d., and refuse in the meantime to do business at lower money. The mineral oil companies agreed last Wednesday to hold burning oil at present price over the new season (1896-97), that being a halfpenny a gallon lower than last winter's figure. The agreement applies to Scotland only, makers being at liberty to sell to English and Irish customers at lower prices if they have a mind. Paraffins and lubricants are unchanged.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow: caustic soda, white, 74° £8. 5s., 70/72° £7. 7s. 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10d. to 8s. 1½d.; sulphate of ammonia, £7. 10s. to £7. 12s. 6d. prompt, f.o.b., Leith; salammoniac, first and second white, £37 and £35. nett, any port; sulphate of copper, £16. 15s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 7s. 6d. to £5., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

New Companies.

Western Oil Manufacturing Company, Ltd.—CAPITAL £2,000, in shares of £1. each.—This company has been formed to acquire and take over as a going concern the business of oil refiners and merchants, carried on at Rock Savage, near Liverpool.

Combe and Danescombe Arsenic Company, Ltd.—CAPITAL £15,000, in shares of £1. each. This company has been formed to acquire metalliferous lands, and to trade as miners, smelters, etc. The subscribers to the memorandum of association are:—F. 6 Queen-street Place, E.C., engineer; J. Taylor, 6, Qu Place, E.C., M.I.C.E.; J. Crocker, 21, Exbury-road, secretary; F. H. Williams, Denton-road, South Croydon, a R. Taylor, 6, Queen street Place, E.C., engineer; A. J. Lark Weltje-road, Ravenscourt-park, clerk; E. Taylor, 6, Qu Place, E.C., engineer.

Magnetite Sewage and Water Purification Company CAPITAL £30,000., in £1. shares. This company has bee to acquire the business carried on by G. H. Skelsey, at Ma and Mostyn, North Wales. The subscribers to the memor association are:—G. H. Skelsey, Silverdale, Oxton, Bi manufacturer; G. Chancellor, 13, Clerkenwell-road, E.C., m H. G. Chancellor, 13, Clerkenwell-road, E.C., merchant Towell, 53, Pelham-road, Noel-park, N., manager; A. Fidle mount, Blackburn, civil engineer; J. Charlesworth, 19, W avenue, Manchester, bookkeeper; E. Marten, 19, Bradst Hackney, clerk.

Freeman, Lloyd and Company, Ltd.—CAPITAL £20 shares of £10. each. This company has been formed to ca business of sugar refiners, saccharine, glucose, dextrine, caram coal, etc., manufacturers. The subscribers to the memor association are:—S. M. Freeman, 7, Victoria-street, Liverpo merchant; W. Freeman, 7, Victoria-street, Liverpool, sugar r Mrs. M. Freeman, Belmont, Waterloo-park, Liverpool; Freeman, Belmont, Waterloo park, Liverpool; J. Lloyd, Gra park, near Liverpool, sugar refiner; C. B. Lloyd, Grassen near Liverpool, sugar refiner; A. Wilson, 14, Cook-street, L solicitor.

Lubricant Syndicate, Ltd.—CAPITAL £20,000., in shar each. This company has been formed to enter into an agreem T. J. Lovett for the purchase of patents relating to the prepa mica lubricants. The subscribers to the memorandum of a are:—E. Harrison, Lake-view, Bowness, Windermere, solic Lewis, 2, Oval-place, Regent's-park, gentleman; B. A. Elki Mansions, Strand, solicitor; W. R. Smith, 3, Laurence P hill, E.C., civil engineer; S. M. Scott, 35, Queen Victor E.C., director; R. B. Webster, 3, Kendal-villas, West gentleman; E. W. Garnett, Savoy Mansions, Strand, solicitor

Vacuum Seasoning Company, Ltd.—CAPITAL £10,0 shares of £1. each. This company has been formed to acq develop Howard's patent (No. 22,692/91) for seasoning, va and drying wood, and also to enter into an agreement with th Drying and Vulcanizing Company, Limited. The subscriber memorandum of association are:—H. Fishwick, The Rochdale, estate agent; A. Molesworth, Hamer Hall, R solicitor; P. J. Taylor, 185, Regent-road, Liverpool, m R. F. S. Molesworth, 19, Old Hall-street, Liverpool, chemist Edmunds, Holmfield, Upton, Birkenhead, merchant; J. Birch-street, Seaforth, engineer; H. K. Patterson, 12, Du Liverpool, merchant.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 8th.

Acetic Acid—

Germany,	123 pks.	A. & M. Zimmermann
Holland,	14	Little & Johnston

Alkali—

France,	200 c.	J. Harrison
,,	90	J. Barber & Co.

Alum—

Holland,	12 pks.	Ohlenschlager Brs
,,	4	J. M. Steel & Co.
,,	52	R. W. Greeff & Co.

Asbestos—

Italy,	£230	Pickford & Co.
,,	275	Brit. Asbestos Co.
Germany,	18	Craven & Co.
Italy,	150	Bender & Marking

Barytes—

Belgium,	34 cks.	J. L. Lyon & Co.
,,	90	Taylor Brs.
Holland,	20	Union L. Co., Ld.
Belgium,	36	W. Harrison & Co.
Germany,	46	,,
Holland,	23	H. Keller & Co.
Belgium,	133	A. Zumbeck & Co.
Holland,	277 pks.	W. Harrison & Co.
,,	262 bgs.	T. & W. Farmiloe

Camphor—

Germany,	150 pks.	Brown & Elmslie

Caoutchouc—

Madagascar,	2 c.	J. W. Cook & Co.
Calcutta,	16	Ernsthausen, Ld.
Madagascar,	30	Anderson, Weber & Co.
Penang,	452	E. Boustead & Co.
Germany,	13	F. Huth & Co.
U. States,	2	L. & I. D. Jt. Co.
Madagascar,	35	Procter Brs.
Singapore,	140	Prop. Bull Wf.

Carbonic Acid Gas—

Holland,	30 carboys	N. & R. Collyer
Germany,	75 pks.	J. G. Back

Castor Oil—

Madras,	31 cks.	Ross & Deering
Belgium,	6 brls.	Freudentheil & Co.
,,	4	Anderson, Weber & Co.

Caustic Potash—

France,	10 drs.	W. E. Cole
,,	20	F. W. Berk & Co.

Chemicals *(otherwise undes.)*—

France,	£80	C. F. Gerhardt
Belgium	35	W. G. Blagden
,,	63	Société John Cockerill
Holland,	690	P. Heydemann
Germany,	100	Phillipps & Graves
,,	340	T. H. Lee
Holland,	6	Phillipps & Graves
,,	10	J. Owen
U. States,	1,450	E. Swallow
France,	126	Fuerst Brs.
,,	6	B. & F. Wf. Co.
Germany,	380	A. & M. Zimmermann
,,	11	E. J. Brash
,,	22	Stein Brs.
Belgium,	42	O. Scholzig
Holland,	270	T. H. Lee
,,	9	F. Boehm
,,	28	Typke & King
,,	20	H. Lorenz
Germany,	31	L. & I. D. Jt. Co.

Copper Sulphate—

Germany,	20 cks.	Charles & Fox

Cream of Tartar—

France,	6 cks.	B. & F. Wf. Co.
Italy,	40 pks.	
,,	7	F. C. Devon & Co.
France,	2	Ross & Deering
Holland,	18	Kirkpatrick & Co.
France,	10	W. V. Robinson & Co.
Portugal,	5	B. & F. Wf. Co.
France,	5 cks.	M. Ashby, Ld.
,,	3	Evans, Lescher & Co.

Dextrine—

France,	30 bgs.	J. W. Drysdale & Co.
Germany,	100	Herm. Fe
,,	40	Ohlenschl

Dyestuffs—

Cochineal

Canaries,	13 pks.	G.

Cutch

Singapore,	100 pks.	B
,,	611	J. Sco
Rangoon,	126 bxs.	J. Pa

Extracts

Belgium,	20 pks.	La
Holland,	5	R. Bo
Denmark,	50	
N. Russia,	2	

Fustic

Hayti,	11 t.	Church

Gambier

Singapore,	172 pks.	Prop. B
Germany,	250	S. Figg
Singapore,	989	S. Berry
,,	1,009	Dysser, Nak

Indigo

Madras,	19 chts.	F. Clayd
,,	8	Croysd
,,	118	L. & I. D
Belgium,	1 cs.	Sod
Bombay,	31	Forbe
Calcutta,	28	L. & I. D

gwood
, 20 t. Churchill & Sim
dder
e, 3 cks. Skilbeck Brs.
rabolams
ay, 1 pk. L. & I. D. Jt. Co.
620 Dalton & Young
1,295 Darling Brs.
625 H. K. Daniels
dies, 700 bgs. ,,
625 Baxter & Hoare
1,000 Marshall & French
700 J. Stone
645 Beresford & Co.
1,600 pkts. P. & O. Co.
imac
100 pks. J. Knill & Co.
iners' Bark
urne, 40 t. Fisher, King & Co.
41 Brown & Elmslie
y, 4 W. Lund
ide, 50 8 A. & W. Nisbitt
Beresford & Co.
meric
ta, 100 pks. Beresford & Co.
ay, 42 Wallace Brs.
ta, 10 bgs Perkins & Homer
lies, 114 L. & I. D. Jt. Co.
66 Wallace Brs.
onia
rkey, 124 t. Adam Brs
14 M. D. Co
5 W. H. Mitchel-
—
, 100 pks. Flageollet & Co
4 cs. Clyde S. Co.
12 C. Tennant, Sons & Co.
18 Ross & Deering
n Chalk —
£90 W. Harrison & Co.
e—
tes, 200 pks. 1,100 c. Ohlenschlager Brs.
50 291 c. J. Keiller & Son
75 450 Page Son & East
100 608 Union Ltge Co.
200 700 L. & I. D Jt Co.
50 280 Robinson, Sons & Co
, 100 100 S. E. Railway Co.
d, 112 110 J. Barber & Co
ny, 13 112 G. Clark & Sons
25 201 Bennett S. S Co.
33 265 J. Knill & Co
tes, 50 285 Deering & Robottom
225 1,350 T. J. Lipton
1,620 2,425 Bellamy & Co.
50 300 R. G. Hall & Co.
£1,741
—
1,760 t. Anglo-Contl. G. Wks.
ulphate—
tes, 9 pks. L. & I. D. Jt Co.
nese Ore—
ny, 10 t. Soundy & Sons
e—
ny, 20 t. A. J. Luke & Co.
20 Perkins & Homer
Alcohol—
es, 40 brls. Stein Brs.
100 J. Whaley
ny, 3 dms. Stein Brs.
£50 F. Braby & Co
490 W. M. Smith & Sons
—
d, 5 cks. 33 pks. Phillipps & Graves
133 W. Harrison & Co.
35 brls. W. V. Robinson & Co.
iate Rock—
n, 148 t. Anglo-Contl. G. Wks.
10 Chemical Works (Late H. & E Albert)
d, 235 West & Penrose
ago—
20 bgs. T. H. Jones
100 B. Gallaway
104 cks. G. H. Haller
384 218 brls. J. Thredder, Son, & Co.

Potassium Carbonate—
Germany, 100 c. R. W. Greeff & Co.
Potassium Sulphate—
Germany, 167 bgs. Blagden, Waugh, & Co.
Rosin—
U. States, 600 brls. T. Nickels & Co.
,, 60 American Trading Co.
Rosin Oil —
Germany, 4 brls. H. Hunt
Saltpetre—
Germany, 69 cks. P. Hecker & Co.
Holland, 85 bgs. J. Greig
Germany, 14 L. & I. D. Jt. Co.
,, 10 Petri Brs
E. Indies, 643 L. & I. D. Jt. Co.
Sodium—
Germany, 19 cs. L. & I. D. Jt. Co.
Sodium Hyposulphite—
Holland, 200 c. R. W. Greeff & Co.
Starch—
Holland, 80 cs. Carey & Sons
,, 740 A. Starck
,, 40 T. H. Lee
Belgium, 748 ,,
,, 200 J Harrison
,, 80 bxs. Leach & Co.
U. States, 100 bgs. R. G. Hall & Co
,, 100 pks. Ohlenschlager Brs
,, 501 L. Sutro & Co.
France, 100 cs B. & F. Wf. Co.
Holland, 80 Hernu, Peron. & Co.
,, 100 Phillipps & Graves
Belgium, 261 F. Claydon & Co.
,, 460 E. & T. Pink
,, 200 Taylor Brs
Germany, 205 Ross & Deering
,, 2,900 2,830 pks. Horne & Co.
Holland, 3,640 Little & Johnston
U. States, 500 bgs. Bellamy & Co.
Germany, 150 cs. Seaward Brs.
Stearine—
Holland, 51 bls. J. Owen
Belgium, 63 bgs. C. S. Lovell
,, 3 cks. T. H. Lee
France, 100 J. Goddard & Co.
Holland, 26 Mordaunt Brs.
Belgium, 369 H. Hill & Sons
Talc—
France, £80 Blackwell, Sons, & Co.
Tar—
Germany, 100 brls. W. Beard & Son
N. Russia, 557 Hoare, Man, & Co.
,, 4,022 Linck, Moeller, & Co
,, 1,316 W. F. Malcolm & Co.
Tartaric Acid—
Holland, 4 pks City Coml. Wf.
,, 16 B. & F. Wf. Co.
Ultramarine—
Holland, 8 cks. Taylor Brs.
Belgium, 6 pks. W. Harrison & Co.
Holland, 11 Phillipps & Graves
Belgium, 10 brls. Leach & Co.
Holland, 20 cks. Thames S. T. & L. Co., Ltd.
Vermilion—
Germany, 2 cs. L & I. D. Jt. Co.
Waste Salt—
Germany, 19 t. W. G Blagden
White Lead —
Germany, 56 cks. T. & W. Farmiloe
,, 19 Burrell & Co.
,, 11 Haeffner, Hilpert, & Co
,, 29 Taylor Brs.
,, 29 W. A. Rose & Co.
Belgium, 50 J. L. Lyon & Co.
Holland, 13 ,,
,, 58 Burrell & Co
Belgium, 19 Perkins & Homer
Wood Pulp—
Holland, 270 pks. Phillipps & Graves
,, 84 J. Owen
Norway, 960 Christophersen & Co.
Sweden, 250 Moreton Cox Brs. & Co.
Norway, 400 Becker & Co.
Belgium, 26 F. Claydon & Co.
Norway, 60 bls. C. S. Lovell
Belgium, 1,472 E. J. & W Goldsmith
Germany, 45 pks. C. S. Lovell
Sweden, 80 W. G. Taylor & Co.
Zinc Oxide—
Holland, 100 cks. Prprs. Dowgate Dk.
Germany, 100 brls, M. Ashby, Ltd.
Holland, 100 ,,
U. States, 100 ,,

LIVERPOOL.

Week ending August 6th.

Acetic Acid —
Rotterdam, 20 balloons
Aluminium Sulphate—
New York, 52 brls.
Asbestos—
Montreal, 1,300 bgs. Bell's Asbestos Co.
Barytes—
Antwerp, 32 cks. 50 bgs.
Bone Meal—
Rangoon, 251 bgs.
Caoutchouc—
Havre, 106 sks.
Cottonseed Oil—
New York, 1 cs. A. Gaskell
,, 50 brls.
N. Orleans, 784
Cream of Tartar—
Tarragona, 5 pps. Sachse & Klemm
Dyestuffs—
Argols
Oporto, 56 cks.
Cutch
Rangoon, 500 bxs. Baring Brs. & Co.
,, 400
Divi Divi
Amsterdam, 106 bgs. Brown, Geveke & Co.
Extracts
Hamburg, 110 bgs. 10 bls.
Philadelphia, 100 bxs
Fustic
Vera Cruz, 2,041 logs Ledward, Bibby & Co.
,, 1,392
New York, 20 ps. B. Ackerley & Co.
Logwood
Belize, 193 t Gonyaley, Byass & Co.
Orchella
San Francisco, 607 bls.
Saffron
Valencia, 1 cs.
Shumac
Barcelona, 250 bgs.
Farina—
Stettin, 125 bgs.
Glucose—
New York, 250 brls.
Boston, 50
Glue—
Rotterdam, 3 cs.
Rouen, 20 41 cks.
Lead Acetate —
Stettin, 15 cks.
Limestone—
Antwerp, 2 crts.
Manganese—
Hamburg, 1 ck.
Manure —
Alicante, 44 bgs. M. V. Prunes
Molasses—
Alexandria, 534 cks
Paint—
Boston, 20 cs.
Amsterdam, 20 brls.
Paraffin Scale—
New York, 55 brls. Thompson & Bedford
Phosphate—
Antwerp, 335 t.
Potash—
Dunkirk, 9 cks. 31 dms.
Rosin —
Boston, 1,602 brls.
Brunswick, Ga., 500
Salt—
Hamburg 1,028 bgs.
Saltpetre—
Hamburg, 4 brls. 4 cs.
Soap—
Newport News, 533 brls.
Philadelphia, 800 bxs.
Sodium Bicarbonate—
Stettin, 22 cks. United Alkali Co
Sodium Silicate—
Rotterdam, 1 ck.
Starch—
Boston, 125 bgs. W. H. Bennett & Co.
,, 1,900
Amsterdam 42 cs.
Antwerp, 20
Rotterdam, 109
Stearine—
Baltimore, 25 tcs.
Antwerp, 38 bgs.
Tallow—
San Francisco, 500 brls.
New York, 10 tcs. Colby & Co.
,, 100
Alexandria, 8
Boston, 40 hds. 50 300
Montreal, 250 Armour & Co.
B. Ayres, 300 pps. London Brazilian Bk.
Baltimore 260
Philadelphia, 150
Tartar—
Bordeaux, 8 cks.
Tartaric Acid—
Boston, 4 bls. 8 kgs.
Treacle—
New York, 1,150 brls.
Ultramarine—
Rotterdam, 20 cks.
White Lead—
Rotterdam, 39 cks.
Wood Pulp—
Sannesund, 5,197 brls.
Oporto, 1,000 Wood Pulp Co.
Montreal, 749 bdls
Rotterdam, 22 pks. 206 bls.
Boston, 699
Zinc Ashes—
Boston, 184 brls.
Zinc Oxide—
Antwerp, 50 brls.
Zinc White—
Stettin, 50 cks. M. Ashby, Ltd.

MANCHESTER.

Week ending August 8th.

Albumen—
Riga, 10 pks.
Antwerp, 10 cs.
Aluminous Cake—
Rotterdam, 24 cks.
Ammonia —
Rotterdam, 1 cylde.
Ammonium Chloride—
Hamburg, 1 ck.
Barytes —
Rotterdam 24 cks.
Antwerp, 100 bgs.
Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.
Rotterdam, 18 cks
Chromium Fluoride—
Rotterdam, 10 cs
Colours —
Rotterdam, 40 cks. 17 cs. 184 brls.
Antwerp, 2 J. T. Fletcher & Co.
,, 7
Creosote Salts—
Hamburg, 4 cks.
Dyestuffs—
Alizarine
Rotterdam, 48 cks.
Extracts
Hamburg, 4 cks.
Antwerp, 9 brls
Logwood
Savannah La Mar (Jam), 484 t.
Shumac
Palermo, 28 bls. H. Watson & Co.
Farina—
Hamburg, 50 bgs.
Glucose—
Rotterdam, 4 cks.
Glue—
Hamburg, 10 cks.
Antwerp, 2
Treport, 1
Fiume, 8 H. Watson & Co.
Lead Acetate—
Hamburg, 20 cks.
Limestone—
Antwerp, 2 cs. J. T. Fletcher & Co.
,, 7

Mineral White—
Treport, 177 cs.
Fiume, 400 bgs. H. Watson & Co.

Pitch—
Hamburg, 59 cks. 113 brls.

Potash—
Treport, 17 cks.

Potassium Chloride—
Hamburg, 5 cks. 40 dms.

Potassium Oxalate—
Rotterdam, 10 cks.

Potassium Sulphate—
Rotterdam, 100 cks.

Pyrites—
Huelva, 1 900 t. Beauford & Co.

Soda—
Rotterdam, 40 brls.

Sodium Nitrate—
Rotterdam, 8 cks.

Starch—
Rotterdam, 210 cs.
Ghent, 34
Antwerp, 117

Sulphuric Acid—
Rotterdam, 10 dms.

Tartar—
Hamburg, 24 cks.

Tartaric Acid—
Rotterdam, 20 cks.

Tin Oxalate—
Rotterdam, 12 brls.

Ultramarine—
Hamburg, 2 cks. 1 cs.

Waste Salt—
Hamburg, [illegible]ity and 500 bgs.

Wood Pulp—
Christiania, 404 bls. M'chester Ship Canal Co.
" 200 Johnsen Gorjensen
Rotterdam, 75
Christiania, 1 371 W. H. Ingram
Drammen 4,165 253 bdls. "
Fiume, 102 pks. H. Watson & Co.

Zinc Oxide—
Rotterdam, 100 cks.

HULL.

Week ending August 8th.

Acetic Acid—
Rotterdam, 54 blns. W. & C. L. Ringrose

Acetone—
Amsterdam, 1 ck. Hutchinson & Son

Albumen—
St. Petersburg, 44 cs.

Ammonia—
New York, 100 clydrs.

Barytes—
Bremen, 1 bg. Veltmann & Co.
" 23 cks. J. Pyefinch & Co.
Antwerp, 176 H. F. Pudsey

Camphor—
Hamburg, 4 cks. Wilson, Sons & Co, Ld.

Chemicals *(otherwise undescribed)*
Antwerp, 50 pks. Wilson, Sons, & Co., Ld.
" 4 dms.
Dunkirk, 79 cks. "
Bremen, 5 cs. Veltmann & Co.
" 2 cks. G. W. Ambler & Co.
Hamburg, 3 11 brls. Wilson, Sons, & Co., Ld.

Cod Oil—
Drontheim, 5 brls. Wilson, Sons, & Co., Ld.
Aalesund, 80 "
Christiania, 4 "

Colours—
Antwerp, 7 cks Wilson, 24 pks. Sons, & Co., Ld.
Rotterdam, 3 Hutchinson & Son
Hamburg, 4 A. Sanderson & Co.
Stettin, 46 Wilson, Sons, & Co., Ld.
Rotterdam, 13 25 pks. W. & C. L. 25 brls. 18 hhs. Ringrose
Antwerp, 2 Bailey & Leetham

Cryolite—
Copenhagen, 3 cks. Wilson, Sons, & Co., Ld.

Dextrine—
Stettin, 60 bgs. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 32 pks. W. & C. L. 4 brls. Ringrose
Indigo
Hamburg, 3 cs. Wilson, Sons, & Co., Ld.

Farina—
Stettin, 68 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 50 W. & C. L. Ringrose

Glucose—
New York, 1,070 bls.

Glue—
Dunkirk, 31 cks. Wilson, Sons, & Co., Ld.
Hamburg, 100 bgs. "
Antwerp, 2 cs. "

Kaolin—
Amsterdam, 20 cks. Hutchinson & Son

Lime—
New York, 1,551 bgs. Wilson, Sons, & Co., Ld.

Naphthol—
Rotterdam, 2 cks. Hutchinson & Son

Phosphate—
Dunkirk, 200 t. Wilson, 1,000 bgs. Sons, & Co., Ld.
Bona, 1,000

Pitch—
Rotterdam, 46 cks. Hutchinson & Son

Plumbago—
Antwerp, 10 bgs. Bailey & Leetham

Potash—
Rotterdam, 22 cks. Hutchinson & Son

Quicksilver—
Hamburg, 4 jars Wilson, Sons, & Co., Ld.

Saltpetre—
Hamburg, 5 cks. Wilson, Sons, & Co, Ld.

Soap—
Rotterdam, 2 cs. W. & C. L. Ringrose

Starch—
Hamburg, 5 bgs Wilson, Sons, & Co., Ld.
Bremen, 2,039 cs. Veltmann & Co.
Ghent, 244 Wilson, Sons, & Co., Ld.
Amsterdam, 156 Hutchinson & Son

Stearine—
Antwerp, 76 bgs. Wilson, Sons, & Co., Ld.

Tar—
Antwerp, 1 ck. Wilson, Sons, & Co. Ld.

Tartaric Acid—
Rotterdam, 6 cks. Hutchinson & Son

Treacle—
New York, 875 brls. Wilson, Sons, & Co., Ld.

Ultramarine—
Rotterdam, 20 cs. Hutchinson 1 ck. & Son

Varnish—
New York, 9 brls.
" 61 pks Wilson, Sons, & Co., Ld

White Lead—
Amsterdam, 11 cks. W. & C. L. Ringrose
Rotterdam, 80 Hutchinson & Son
Antwerp, 21 Bailey & Leetham

Wood Pulp—
Abo, 100 bls. J. Good & Sons
Stettin, 44 Wilson, Sons, & Co., Ld.
Stockholm, 90 "
Gothenburg, 953 "
Drontheim, 388 "
Christiania, 405 "

Zinc Oxide—
Antwerp, 53 cks. Bailey & Leetham

Zinc White—
Rotterdam, 25 cs. Hutchinson & Son

GLASGOW.

Week ending August 13th.

Alum—
Hamburg, 119 cks.

Ammonium Acetate—
Rotterdam, 1 brl. J. Rankine & Son

Aniline—
Amsterdam, 3 cks. 1 cs.

Barium Sulphate—
Louvain, 127 cks. 1,670 bgs. Schneider & Co.

Barytes—
Rotterdam, 83 pks.

Castor Oil—
Antwerp, 70 cks.
Calcutta, 100 cs.

Colours—
Antwerp, 5 cks.
Rotterdam, 11 pks.
" 8 22 brls 3 cs. J. Rankine & Son

Cottonseed Oil—
New York, 50 brls.

Cream of Tartar—
Oporto, 5 cks.

Dyestuffs—
Cutch
Colombo, 60 cs.
Rangoon, 700 bxs. P. Henderson & Co.
Logwood
Bowling, 762 t. M Arthur, Scott & Co.
Hayti, 125 "

Gelatine—
Rouen, 10 cs.

Glucose—
New York, 600 brls.

Glue—
Fiume, 100 bls.
Rouen, 12 11 cks 45 cs.
Hamburg, 100 bgs.
Rotterdam, 40 J. Rankine & Son

Ochre—
Rouen, 9 cks.
Baltimore, 218 brls.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paraffin Wax—
Rangoon, 1,124 bxs. P. Henderson & Co.

Phosphate of Lime and Rock—
Antwerp, 113 bgs.

Potash—
Rotterdam, 20 cks. J. Rankine & Son

Rosin—
New York, 250 brls. 251 bxs.

Salt—
Hamburg, 50 bgs.

Saltpetre—
Hamburg, 3 cks.

Soap—
Fiume, 27 cs.
Rouen, 60
New York, 211 brls.

Soda—
Hamburg, 40 cks.

Starch—
Ghent, 40 cs.
New York, 450 bgs. 900 bxs.

Stearine—
Antwerp, 63 bgs.
Amsterdam, 123

Tartaric Acid—
Rotterdam, 8 cks. J. Rankine & Son

Treacle—
New York, 538 brls.

Ultramarine—
Hamburg, 2 cs.
Rotterdam, 5 J. Rankine & Son

Varnish—
Antwerp, 1 cs.

Waste Salt—
Hamburg, 132 t. 508 bgs.

White Lead—
Rotterdam, 67 cks. J. Rankine & Son

Wood Pulp—
Hamburg, bls.
Christiania, 150
" 2,508
Oporto, 250

Zinc Oxide—
New York, 100 brls.
Antwerp, 25 cks.

Zinc White—
Rotterdam, 25 cks.

TYNE

Week ending Aug

Barium Chlorate—
Rotterdam, 350 bgs.

Barytes—
Rotterdam, 112 cks.
Antwerp, 270 bgs.

Cod Oil—
Bergen, 18 brls.

Colours—
Hamburg, 3 cks.

Limestone—
Antwerp, 3 cs.

Pyrites—
Huelva, 2,089 t.

Soap—
Rotterdam, 4 cs.

Starch—
Rotterdam, 100 cs.
Antwerp, 42

Wood Pulp—
Copenhagen, 40 bls.
Christiania, 2,089
Gothenburg, 320

GOOLE

Week ending Aug

Acetic Acid—
Rotterdam, 4 cks.

Alizarine—
Rotterdam, 28 cks. 1

Alkali—
Calais, 4 cks.

Barytes—
Rotterdam, 53 bgs.

Chemicals *(otherwise*
Rotterdam, 1 ck.

Colours—
Amsterdam, 3 cks.
Hamburg, 2

Dyestuffs *(otherwise*
Rotterdam, 300 cks. 3
Boulogne, 5

Farina—
Hamburg, 132 bgs.
Delfzyhl, 120
Amsterdam, 100

Glucose—
Hamburg, 40 cks.

Potash—
Dunkirk,
Rouen, 9 cks.
Calais,

Saltpetre—
Hamburg, 10 cks.

Starch—
Ghent, 160 cs.

GRIMSBY

Week ending Augu

Albumen—
Hamburg, 5 cks.

Caoutchouc—
Rotterdam,
Hamburg,

Chemicals *(otherwise*
Hamburg,
Antwerp,

Colours—
Hamburg, 60 cks.
Antwerp, 3

Dyestuffs *(otherwise*
Antwerp, 30 cks.

Lamp Black—
Malmo, 13 cks.

Zinc Ashes—
Antwerp, 9 cks.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

ONDON.

nding August 12th.

	10 c.		£12
	t. 11 c		£19
n Carbonate –			
arg, 100 kgs. 100 brls.			£426
n Chloride—			
ta, 1 t. 2 c.			£35
n Sulphate—			
125 t.			£1,031
120			950
s Ammonia –			
3 cylders.			£13
cid—			
10 c.			£14
1 t. 15 c.			£42
1			21
ay, 3 cs			12
3			53
20 kgs.			21
Acid Gas—			
62 tubes			£23
oda—			
12 c.			£13
5 t. 18			40
11 10			91
g, 6			5
a. 6			6
th, 15			15
5 14			45
. 10 1			74
(otherwise undescribed)			
2 cks. 5 cs. 30 kgs			£233
1 t. 9 c			58
1 cs.			82
8			101
d—			
2 c.			£15
burg, 10 kgs			68
2 t.			252
4			25
3			20
6			37
11			63
n, 2 brls.			25
ducts—			
ne			
7 cks.			£147
Dye			
1 cs.			£23
2			55
Oil			
20 drs.			£950
48 cks.			£223
c Acid			
3 cks.			£23
g, 25 drs.			24
82			687
e			
23,500 galls.			£123
a			
21 brls.			£65
aline			
63 bgs.			£44
32			27
2,174 cks. 4 777 bgs.			£1,959
News, 2,032			503
125			106
ne			
27 cks			£337
20 runlts.			£12
100 drs.			18
rg, 250 brls.			£210
150			100
ulphate—			
2 t. 16 c.			£44
3 1			55
ry, 1			19
e Sublimate –			
10 c.			£92
f Tartar—			
1 t			£98
y, 2 cs.			16
1 1 c.			100

Disinfectants—

Labuan,	4 cs.		£13
Singapore,	23 cks.		65
Hamburg,		2 brls.	10
Melbourne,		12 c.	32
Durban,	60		27

Guano—

Landerneau,	170 t.	£1,700

Iron Sulphate—

Auckland,	12 t.	4 c.	£24

Manure—

Malaga,	14 t.	11 c.	£100
Lyttelton,	25	10	80
Riga,	351	16	740
Jamaica,		10	38

Phosphates—

Treport,	70 t.	£435

Phosphorus—

Pt. Elizabeth,	5 cs.	£41

Potassium Chlorate—

Suez,	1 t.	£46

Potassium Cyanide—

Pt. Elizabeth,	50 bxs.	£513
D lagoa Bay,	10 t.	1,110

Potassium Prussiate—

Yokohama,	10 c.	£33

Saltpetre—

Melbourne,	2 t.		£45
Pernambuco,	7	18 c.	177
Amsterdam.	1	10	33
Rio de Janeiro,	3	16	84

Salts of Potash—

Delagoa Bay,	6 t. 14 c.	£647

Sheep Dip—

E. London,	21 t.	19 c.	£425
Lyttelton,		75 cs.	112
B. Ayres,	79	12	1,932
Sydney,	2	5	68

Soda—

Malta,	10 c.	£8

Soda Alkali—

Archangel,	20 t.		£165
Rotterdam,	5	7 c.	32

Soda Ash—

Launceston,	4 t.	1 c.	£19
Hobart,	6	3	28

Sodium Acetate—

Brisbane,	1 t.		£23
Melbourne,	1	1 c.	16

Sodium Bicarbonate—

Callao	2 t.		£15
Cape Town,		10 c.	7

Sodium Carbonate—

Pt. Elizabeth,	10 c.	£7

Sodium Silicate—

Hobart,	10 t.	8 c.	£49

Sodium Sulphate—

Ghent,	55 t.	£55

Sodium Tartrate—

Oporto,	3 c.	£13

Strontium Nitrate—

Calcutta,	20 kgs.	£26

Sulphur—

Pernambuco,		30 kgs.		£15
Punta Arenas,	102 cks.		60 brls.	258
B. Ayres,	8 t.			60
Adelaide,	10	15 c.		58
E London,	75 cks.	125 kgs.		114
Mossel Bay,	8 t.	19 c.		97

Sulphuric Acid—

Cape Town,	5 cs.			£16
Colombo,	1 t.	10 c.	10 drs.	29

Superphosphates—

Martinique,	340 t.	£1,020
Libau,	300	900
Riga,	672	2,016

Tartaric Acid—

Sydney,	1 t.	£124
Algoa Bay,	1 cs.	10

Zinc Chloride—

Brisbane,	100 drs.	£36

LIVERPOOL.

Week ending August 12th.

Acetate of Iron—

Vera Cruz,	1 t.	1 c.	2 q.	£6

Acetic Acid—

Lisbon,	3 t.	2 c.	1 q.	£19

Alkali—

Valparaiso,		6 c.	1 q.	£7
Hong Kong,		3	2	4

Alum—

Lisbon,	5 t.	5 c.		£23
Port Natal,		10		4
Montreal,	10			50
Hobson's Bay,	1			5
Guayaquil,		18		5
Cadiz,	1	2		6
Seville,	8	18		44
Galatz,	1			9
Piræus,	5	19		27

Ammonia (Liquid)—

Vera Cruz.		1 c.	3 q.	£2

Ammonium Carbonate—

Paris,	1 t.	5 c.		£10
Stettin,		9		13
Genoa,	1	5		53
Ibrail,		10		18

Ammonium Chloride—

Paris		16 c.		£32
Lisbon,		9		18
Alexandria,	2 t.			70
Cartagena,		14		32
Cape Town,		5	2 q.	11
Seville,		10		18
Galatz,		10	3	21
Smyrna,	1	10	2	54
Genoa,	3	13		64
Rotterdam,		15		16
Antwerp,	2			41
Hamburg,	3	9		72
Naples,		5		6
Trieste,	1			34

Ammonium Sulphate—

Messina,	10 t.	3 c.	1 q.	£83
Santos,	3	18		31
Rouen,	10	1	1	80
Sourabaya.	87	9	3	760
Las Palmas,	70			574
Honolulu,	406	3	3	3,243
Barcelona,	60			477
Palermo,	5			40
Valencia,	19			133

Arsenic—

Halifax,	1 t.	1 c.		£25

Bleaching Powder—

Baltimore,	139 cks.	25 bxs.	
Boston,	413		
Bremen,	5		
Calcutta,	127 cs.		
Cape Town,	40		
Halifax,	3 c.		£10
La Plata,	2		
Newport News,	434		
New York,	273	50 brls.	
Philadelphia,	234		
Rio de Janeiro,	30 cs.		
Rouen,	25		
San Francisco,	30		
Vera Cruz,	50		

Boracic Acid—

B. Ayres,		5 c.		£8
Rotterdam,	1 t.	4		34
Hamburg,	5	8	2 q.	106

Borax—

Vancouver, B C,	1 t.	1 c.		£20
Sydney,		12		12
Alexandria,		19	1 q.	18
Antwerp,	2	3	3	42
Mollendo,		9		9
Stettin,	13	15	1	237
Rotterdam,	28	8		559
Hamburg,	4	8		85
Yokohama,	3	11	2	70
Montreal,	11	6		228
E. London,	1			14
Toronto,	1	10		30

Calcium Chloride—

M. Video,	2 t.	17 c.		£7
Sydney,	5	4		12

Carbolic Acid—

Hamburg,		8 c.		£29
Barcelona,		7		21
Genoa,	1 t.	14	3 q.	112
Hamilton (Ont.),		12	2	39
New York,	4	4	3	242
Rio de Janeiro,	3	17		93
Rouen,	10	17		228

Caustic Potash—

San Francisco,	5 t.	7 c.		£177
Baltimore,	2	4		64

Caustic Soda—

Alexandria,	10 dms.		
Algoa Bay,	6		
Amsterdam,	40		
Ancona,	77		
Bahia,	80		
Baltimore,	200	25 bxs. 10 brls.	
Barcelona,	130		
Bari.	104		
Boston,	200	75 kgs.	
Bremen,		5	
B. Ayres,	125		
Callao,	830		
Carupano,	12		
Corinto,	7		
Dunedin,		3 cks.	
Fairwater,	122		
Fiume,	58		
Genoa,	175		
Hamburg,	10		
Ilo Ilo,	20		
Kingston,	2		
Konigsberg,	18		
Leghorn,	60		
Malaga,	53	5	
Manila,	3		
M. Video,	10		
Montreal,	145	10	
Naples,	45		
New York,	712		
Odessa,	525		
Paranagua,	15	8	
Pernambuco,	30		
Philadelphia,	905		
Rouen	17		
St. John's, N'fld.,	30		
Samarang.	17		
San Francisco,	20	60	
Santos,	50		
Shanghai,	16		
Seville,	85		
Tampico,	500		
Valparaiso,	124		
Venice,	40		
Vera Cruz,	39		
Yokohama,	80		

Chemicals *(otherwise undescribed)*

Piræus,		15 c.		£26
Oporto,		4		6
Lisbon,		10		19
Casa Blanca,	5 t.	6		15
St. John, N B,	4	14	2 q.	25
Bombay,	13	4	1	83
Antwerp,		10		18
Samsoun,		10		18
Bourgas,		10		18
Kvempberg,		12		19
Genoa,	2	10		87
Hamburg,		4		7
Batoum,	5			195
Odessa,	26	1		241
Montreal,	2			59
New York,		14		20

China Clay—

Bombay,	337 cks.	
Boston,	1,122	270 bgs.
Calcutta,	16	
San Francisco,	69	

Chromic Acid—

Hamburg,	5 c.	£16

Coal Products—

Alizarine Oil

Montreal,	16 brls.	

Aniline Salt

Bombay,	10 cs	
Genoa,	4 cks.	

Naphthaline

Antwerp,	18 t.	15 c.	£40

Pitch

Vigo,	10 brls.	

Tar

Brass,	4 brls.	
Samarang,	73 cks.	

Cobalt—

Nagasaki,		4 c.	2 q. £105

Cobalt Oxide—
Valencia, 1 q. £7

Copper Sulphate—
Pernambuco, 10 c. £8
Catania, 2 t. 8 39
Rotterdam, 1 17
Messina, 1 2 q. 16
Paris, 5 82
Rio de Janeiro, 2 4 46
Galatz, 7 124
Rouen, 4 17 1 90
Barcelona, 10 157

Copperas—
Rotterdam, 4 t. 10 c. 3 q. £8
Quebec, 3 5
Caldera, 20 32

Disinfectants—
Rangoon, 10 cks. £12
Rouen, 1 t. 3 c. 8

Dried Blood—
Dunkirk, 10 t. 7 c. 3 q. £62

French Chalk—
Pernambuco, 50 bgs.

Gelatine—
New York, 180 bxs.

Iron Nitrate—
Geelong, 1 t. £8

Lime—
Akassa, 17 t. 10 c. £46

Magnesia—
Constantinople, 1 cs. £35
Lisbon, 2 t. 4 c. 20
Carril, 1 6
Genoa, 4 100
Vera Cruz, 2 5

Magnesium Sulphate—
Pernambuco, 100 bgs.
Truro, 20 brls.
Rio de Janeiro, 4 t. £24

Manure—
Hamburg, 50 t 2 c. £200
Santos, 1 6
Teneriffe, 11 9 92
Venice, 246 6 646

Oxalic Acid—
Stettin, 1 t. £29
Lisbon, 1 2 c. 3 q. 34

Paint—
Amsterdam, 5 brls.
Antwerp, 1 dm. 5 kgs.
Bahia, 40 pks.
Beyrout, 4 cks.
Benguela, 10
B. Ayres, 11
Cadiz, 70 25
Calcutta, 25
Callao, 30
Cape Town, 2 cs. 3 90
Colon, 6
Constantinople, 18 tins
Corfu, 2 brls.
Ferrol, 1
Galatz, 100
Genoa, 100 bgs.
Gibraltar, 6 dms.
Hamburg, 16 1
Havana, 2
Hong Kong, 2
Ilo, Ilo, 20 500
Iquique, 20 cs
Jaffa, 8
Lagos, 179 pks.
Lanzarote, 42
Larnaca, 2 4 brls.
Lisbon, 20
Madeira, 2 cs.
Malaga, 11
Manila, 2,450
Mollendo, 6
M. Video 11
Mossamedes, 1 cs. 2
New York, 2 cks.
Penang, 400
Pernambuco, 53 dms.
St. Thomas, 2
Savanilla, 175
Shanghai, 20 dms.

Painters' Colours—
Acajutla, 10 cks.
Beyrout, 20 brls.
Bombay, 31 cs. 1,542 kgs. 62
B. Ayres, 15
N. York, 1 14 196 125
1 bx.
Odessa, 34
Old Calabar 1 1
Oporto, 78
Para 22
Penang, 475 dms. 150
Pernambuco, 3 cs. 8 pks.
Quebec, 25 brls.
Richibucto, 80 1
Rio de Janeiro, 1 cs. 80
Pt. Natal, 1 cs. 8 cks.
San Juan, 116 14
Santander, 20
Santos, 16
Talcahuano, 4 25
Valparaiso, 200 45 dms. 45 2 brls.
Varna, 5

Paraffin Wax—
Malta, 10 cs.
Trieste, 11 bgs. 6

Phosphorus—
Hamburg, 2 c. £25
Sourabaya, 3 35
Shanghai and Hiogo, 2 t. 8 2 q. 400
Vera Cruz, 5 55

Picric Acid—
New York, 20 cs. £92

Potassium Bichromate—
Antwerp, 4 t. 19 c. £198
Syra, 4 brls. 30

Potassium Bromide—
Vera Cruz, 1 c. £12

Potassium Carbonate—
Baltimore, 4 c. £6
New York, 10 t. 323

Potassium Chlorate—
Corunna, 10 c. £20
Calcutta, 10 19
Konigsberg, 8 t. 5 326
Philadelphia, 7 10 284
Copenhagen, 2 80
Rotterdam, 3 4 50
New York, 3 15 143
Gothenburg, 2 10 98
Stockholm, 12 10 513
Hamburg, 3 13 150
Yokohama, 15 620
Sydney, 1 45

Potassium Metabisulphite—
Malta, 1 c. £10

Potassium Prussiate—
Naples, 5 c. £23

Salt—
Akassa, 963 t.
Adelaide, 25
Amsterdam, 120
Ambriz, 20
Ambrizette, 10
Antwerp, 167 10 c.
Baltimore, 199
Boston, 620
Brass, 10
B. Ayres, 144 15 100 cs.
Calcutta, 1,629
Cameroons, 122
Fuca, 20
Forcados, 266
Ghent, 55
Halifax, 635 40
Kinsembo, 20
Lagos, 101
Loango, 16
Manaos, 22
Massabe, 40
Matadi, 26
Mayaquez, 2
Melbourne, 15
Montreal, 715
Muculla, 4
Noqui, 119 11
Orebak, 123
Para, 200
Philadelphia, 400
Pt. Elizabeth, 9
Quillo, 50
Richibucto, 250
Rotterdam, 240
Salt Pond, 12 10
San Francisco, 56
Svendborg, 550
Sydney, 25
Valparaiso, 300
Victoria, W.C.A., 10 14
Warri, 5

Saltpetre—
Para, 10 c. £12
Sydney, 10 12
Parnahyba, 1 t. 11 1 q. 38

Sheep Dip—
B. Ayres, 8 t. 18 c. 2 q. £250

Soap—
Abonnema, 125 bxs.
Addah, 25
Alexandria, 10 cs.
Algoa Bay, 103
Amsterdam, 150
Antofagasta, 24
Antwerp, 10 cks.
Barbadoes, 30 3
Belize, 375
Bombay, 1,500 2 346
Bordeaux, 500
Boston, 500
Buguma, 125
Cabenda, 30
Calcutta, 21
Cameroons, 100
Cape Coast, 200
Cape Town, 350 35 pks. 10
Colombo, 6
Colon, 3
Curacao, 380
Delagoa Bay, 635
Forcados, 200
Genoa. 100
Hong Kong, 515
Iquitos, 100
Karachi, 2,144
Manaos, 930
Matadi, 90
Naples, 12
New York, 150 12 cks. 500
Old Calabar, 1
Palma, 1,001
Para, 100
Philadelphia, 500
Pt. Elizabeth, 553 35 brls.
Pt. Natal, 300 39
Rangoon, 1,001 9
Rotterdam. 500
St. John's, N'fld. 325 55
St. Lucia, 50
St. Thomas, 50
Singapore, 2,270
Trinidad, 775
Victoria, W.C.A., 140

Soda—
Corral, 6 cks.

Soda Alkali—
Barcelona, 7 brls.
Bilbao, 35
Genoa, 70
Leghorn, 37
Odessa, 150
Quebec, 85
Salonica, 35
Sydney, 40

Soda Ash—
Algoa Bay, 30 bgs.
Antwerp, 260
Baltimore, 1,440
Malta, 20 brls.
M. Video, 15 cks.
Montreal, 70
New York, 952 80 22 196 tcs.
Philadelphia, 400 134 193
Rio de Janeiro, 100 20
St. Petersburg, 221
Smyrna, 100
Sydney, 98
Adelaide, 100
Barcelona, 20
Bombay, 13
Boston, 200 38 29
B. Ayres 250 65
Calcutta, 50
Callao, 30
Gothenburg, 50 10
Halifax, 14
Hamburg, 100
Hiogo, 266
Konigsberg, 65
Madras, 8 2
Piræus, 70
Pt. Elizabeth, 155
Yokohama, 200

Soda Crystals—
Alexandria, 50 brls.
Bombay, 130 kgs.
Boston, 196
B. Ayres, 171
Halifax, 90
Malta, 50 cks.
Montreal, 50
Paris, 60
Philadelphia, 374
Rangoon, 7
St. John, N.B., 100

Sodium Arseniate—
Vera Cruz, 1 cs

Sodium Bicarbonate—
Ancona, 30 kgs. 2 cks.
Antwerp 30 20
Barcelona, 200 3
Bombay, 160
Bordeaux, 10
Cadiz, 20
Cape Town, 105 10 bgs.
Copenhagen, 40 40 cs.
Dunkirk, 10
E. London, 20
Galatz, 34
Genoa, 50 12
Halifax, 350
Havre, 20
Hiogo, 500
Konigsberg 100
Madras, 155 10
Malaga, 20
Marseilles, 238
Montreal, 50 20
Newcastle, 210
Newport News, 150
New York, 20
Paris, 191
Perth, 20
Rotterdam. 82
St. John, N.B., 400
St. John's, N'fld., 33
Seville, 50
Stettin. 60
Sydney, 50 10
Trieste. 18
Valencia, 10
Venice, 50
Vera Cruz, 40

Sodium Carbonate—
Montreal, 2 cks.

Sodium Chlorate—
Danzig. 20 kgs.
Gothenburg, 5
Lisbon. 2 cks.
New York, 60

Sodium Hyposulphite—
Cartagena, 20 kgs.
Lisbon, 10

Sodium Nitrate—
Hobson's Bay, 50 bgs.

Sodium Silicate—
Arica,
Brisbane, 10 cks.
Lisbon, 64
Madeira. 83
New York,
Philadelphia, 11
Piræus. 6
Savanilla,
Sydney, 30
Valencia. 700 bgs.
Volo,
Adelaide, 60
Corinto, 9
Hamburg, 70

Strontia—
Hamburg, 2 t. 3 c.

Sulphur—
Cartagena, 22 c.
Penang, 1 t.
Boston, 250 7

Sulphuric Acid—
Penang, 4 c.

Superphosphates—
Las Palmas, 80 t.

Tartaric Acid—
New York, 3 c.

Varnish—
Alexandria, 2 cs.
La Guayra, 2
Madras, 5
Naples, 4

Zinc Chloride—
Rio de Janeiro, 2 t. 5 c.

MANCHESTER

Week ending August

Alum—
Alexandria, 223 brls.
Tunis, 1

Ammonium Carbonate—
Antwerp, 2 cks.
Hamburg, 6

Ammonium Chloride—
Beyrout, 10 brls.
Busreh, 5
Tunis, 1

Aniline Colours—
Rotterdam, 2 cks.

Aniline Oil—
Rotterdam, 5 dms.

Aniline Salt—
Rotterdam, 5 cks.

Anthracene—
Rotterdam, 105 cks.

Asbestos—
Bombay, 6 coils

Chemicals (*otherwise*
Alexandria, 10 cks.

PRICES CURRENT. WEDNESDAY, AUGUST 19TH, 1

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids :—			
Acetic, 25 %, and 40 % .. .. per cwt.	5	9 &	8/9
,, Glacial .. .. ,,		10/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅜
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	10	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium .. .. per lb.	0	2	10
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &		35/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	16	3
,, ,, (grey) Hull .. .. ,,	7	15	0
Aniline Oil (pure) .. .. per lb.	0	0	9¾
Aniline Salt ,, ... ,,	0	0	8¾
Antimony .. .. per ton	29	7	6
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to		65/-
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	12	0	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to		30/-
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	3	10½
,, 50/90 ,, ... ,,	0	2	10½
Carbolic Acid (crystallised 40°) .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	2	2
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	11
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	5½
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	2
Copper .. .. per ton	47	10	0
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	0	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	15	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Caloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magnesia .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. per ton	2		
Manganese, Sulphate .. .. ,,	16		
Borate .. .. per cwt.	2		
Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils :—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	18		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	21		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. .. nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	20		
,, ,, (Caustic Potash) 70/75 % .. ,,	19		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % .. .. ,, ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4		
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3		
,, ,, (Soda Crystals) .. .. .. ,, ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton.	20		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	8		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25 % .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	2		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	8		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	6		
,, (Roll Brimstone) .. .. ,,	6		
,, Brimstone : Best Quality .. .. .. ,,	4		
Superphosphate of Lime (26% .. .. ,,	2		
Tallow .. .. per cwt.	2		
Tin Crystals .. .. ,,	15		
,, English Ingots .. .. per lb.	0		
Zinc (Spelter) .. .. per ton	63		
,, Chloride (solution, 100° Tw.) .. .. .. ,,	17		
	5		

THE

CHEMICAL TRADE JOURNAL

AND

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CHEMISTS AND CHEMICAL INDUSTRY.

FOR the last two or three years we have heard a great deal about the decline of the English chemical trade, and the special commissioners and correspondents of the daily press have not spared the chemical industry in contrasting our progress with that of Germany. The man in the street would tell you with assurance that we are played out, and our supremacy a thing of the past.

Now while we know that there is an under-current of truth in all that has been written on this subject, to those familiar with chemical industries, much that they know to be unreliable is apparent.

Almost without an exception our readers will be familiar with the facts made public by Mr. T. Tyrer in his late address in the capacity of President of the Society of Chemical Industry. They were the outcome of investigations prompted by the very desultoriness of the statements made by those who had dealt with the matter in the vein of the alarmist, and probably with more desire to paint a striking and sensational picture than to write up the facts as revealed by a series of camera views. In his address Mr. Tyrer laid many bogeys, but also laid bare several of the sores that have been produced by the chafing action of competition. Inflammation has attacked other parts of the anatomy of the chemical trade, and it can only be alleviated by strengthening those parts and fitting them to bear the additional friction and racket to which they must inevitably be subjected. His medicine and ointment was—education. Not in the old sense but the new, and after the same fashion that has enabled our competitors to become such.

A prophet is not without honour save in his own country, we know full well, and there was some danger that on this account the forecast which had been plainly stated, and had been shown to have a basis of fact, stood in danger of being read, criticised or approved, and then—forgotten. It is very fortuitous, therefore, just at this holiday time of the year when manufacturers and others have more time at their disposal to consider what they deem these points of secondary importance, that Professor Ramsay should have given a fresh impetus to the discussion of scientific education by publishing a letter giving the views of no less a personage than Professor Ostwald. Coming from a German scientist, and one so typical of the benefits of combining theory and practice, we are able to see ourselves as others see us. Professor Ostwald deals fairly but very outspokenly with the defects of the present system, and a comparison of his opinions with the utterances of Mr. Tyrer, shows clearly that the latter must have been truly possessed with the "giftie" after all.

While emphasising now some of the more important points, we shall endeavour next week, if space will permit, to give the letter *in extenso*, in the hope that after the perusal of the

following, the details and teachings of the entire letter may be thoroughly digested.

The following are some of the points which we would expound. The secret of success in the German system is said to be freedom. Apparently it is. Though to us the system may at first sound heretical and almost fatuous in principle, in practice its achievements testify to its soundness and reliability. The primary object is to *educate*, and so drives the desire to examine into the background. In the course sketched by Prof. Ostwald, the student is taught for about two years until he is fitted to commence work on his "theme" for his degree. In the choice of the latter, though advised by his professor, he is still a free agent, and in the completion of his "theme" his individuality is developed and he ripens into a chemist. Having been taught for two years the use of his tools he then begins to learn to work with them and gain personal experience—the best of teachers. In this country the majority only go so far as to learn the tools and their uses. Having gone so far, most of those who turn out successful, go to the Continent to gain proficiency and profit by the "theme" system. It is after the completion of the same that the examination comes. But it is not dreaded, and practically it has been passed if the merit of the theme is sufficient.

Yet how different is it with us. A ceaseless fire of examinations is kept up from first to last, by which the student is kept in a well nigh constant state of tremulation and anxiety. There is no respite; a veritable battery is brought to bear on him. After the half-yearly come the sessional examinations in each of the three years' course, leading up to the college Final, concurrently with which the harrowing anticipations of Preliminaries and Intermediates have to be suffered, culminating in the ordeal of the degree Final. Under the pounding of this battery all the characteristic corners of students are knocked off and they are reduced to machines of one type, save in the case of a few of the more strikingly rugged natures, whose individuality is blunted but not destroyed.

Before facing the full broadside of the examination batteries the student must practically decide whether he is to follow technical or pure science, for after the encounter he will only fit into a nicely rounded niche in some university edifice, since he lacks the angularity which will enable him to edge his way into rugged nooks and corners and so imbed himself in the bricks and mortar of industrial buildings. Not so the German student. Both paths are equally open after he has attained his degree.

The reason for this is of course partly due to the different attitude taken by German manufacturers. They believe in their theoretical scientists. It must be admitted though that they have learned by experience how under their educational system such men are valuable in the works. We can hardly say as much of them here.

They do not mind keeping on an unproductive man for two or three years; which method would hardly find a parallel here among manufacturers. The latter generally want a lot for nothing, and want it quickly. Naturally they don't get it, and it is their own fault if sometimes they get nothing at all. If there was a little less of the Thomas Adidymus about them they would do better, and they must certainly change their tactics if they wish to encourage young rising chemists to benefit by the changes in their educational facilities that we would advocate.

It is in this direction that most needs to be done, and in Prof. Ostwald's letter we have presented a standard to work up to. Though there are justly mutual recriminations between the chemists our colleges turn out and manufacturers, the root of the evil is the general state of relations the students and professors.

We can compare well with the Fatherland in the r institutions and laboratories, and even in some technical laboratories provided by manufacturers fo the miniature manufacturing scale also make a contrast; but how different is the relationship be professor and *all* his students (not the select few) as by Prof. Ostwald, and as *we* know it. In the form resembles that between father and son, in the latte a nephew and a distant uncle. On the Continent th Liebig, which was more fully and familiarly reveale Hofmann, still sways the teaching staffs. With us it dormant. We do not think it is extinct, howeve plain words the moral of Prof. Ostwald's letter is, t it is awakened into activity the sooner shall we re ground and progress ——but not till then. So high a have German manufacturers of the qualifications an of their theoretically as well as practically expert that a manufacturer, it appears, recently offered a salary to an extraordinary professor at a university him to become chemist to the works. It is a regret that he would have to be a very "extraordinary" pro even an enlightened manufacturer to do the sam country. We shall be told this is treading on what some to be dangerous ground. Delicate it may be, but up is not so dangerous as leaving it untraversed. not two ways of thinking on this point, and we do no to aver that so long as the necessary reforms albeit firmly and persistently, insisted on, to the ex personalities, those who still stubbornly continue umbrage at them, are, and can be, nothing but e all that is beneficial to the advancement of their their country's welfare.

In pursuance of this spirit of fairness there is which must be made clear, if those who will have to brunt of the change are to be justly dealt with.

We spoke at the outset of freedom in teaching and being the mainspring of the German system, but th other application of the principle of freedom th Ostwald does not directly refer to - greater freed money in the endowment of chairs of chemistry a sciences. Here we put a premium on a divided inte a general but honourable way livelihood comes first, students next. The chief fault lies at the doors of t institute these premiums.

It is no good giving a blank denial, for do we not our certain knowledge that the wise but unstinted e this branch of freedom by the Continental Sch actually taken one of the most eminent technologis this country to be a foreign professor. No wo feeble but foolish begin to fall back on protect medicine for trade.

DRY CRUSHING AND DIRECT CYANIDING.—At the annu of the Chemical and Metallurgical Society of the Rand M Feldtmann, the new president of the society, occupied the in the course of an address, which was mainly taken up question of how to improve the cleaning up in works w precipitation is used, he incidentally observed:—"Within th months I anticipate the much-vexed problem of dry crushing a cyaniding will be put to a thoroughly practical test in this cou Afrikander Company, in Klerksdorp, are erecting a plant calc crush and treat 10,000 tons per month. From extensive ex which have been carried out I have every confidence that the the cyaniding will be satisfactory, and will promote the questi crushing from the region of debate into a matter of practical technology."

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Artificial Stone and Slate. W. Millar and O. J. Owen. 17,627. August 10.
Producing Acetylene and Carbonic Acid Gases Combined. R. Goodwin. 17,644. August 10.
Obtaining Porous Metals by Electrolysis. Hoepfner. 17,671. August 10.
New Chemical Compound. F. J. Jones and G. W. Jones. 17,717. Aug. 11
Producing Carbonic Acid and Hydrogen Gases. B. T. L. Thomson. 17,778. August 11
Apparatus for Carbonating Liquids. T. B. Booth and A. Robinson. 17,821. August 11.
Treating Zinc Ores, etc., to Produce Zinc, Chlorine, Sodium Sulphate, and Other Products. E. L. Pease. 17,840. August 12.
Treatment of Sulphide Ores. L. R. Scammelle. 17,864. August 12.
Treating Moss Litter Manure to Obtain Products Therefrom. E. van de Griendt. 17,883. August 12.
Eliminating Arsenic from Metallic Copper. B. and J. W Thomas. 17,941 August 13
Decanting Apparatus. W. L. Wise. 17,980. August 13.
Manufacture of Explosives. M. Bielefeldt. 18,034. August 14.
Smoke Prevention. J. Lever. 18,100. August 15.
New Compound for Treating Fibres. W. T. Forbes. 18,132. August 15.
Apparatus for Condensing Nitrous Acid or Other Fumes or Vapour. J. L. Dobell. 18,137. August 15
Smokeless Explosives. H. Maxim. 18,142. August 15

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

A Process for the Manufacture of Double Compounds of Sulphuret of Aluminium and other Metallic Sulphides. D. A. Peniakoff, Rue Bauduin Pièrre, Huy, Belgium. Eng. Pat. 7,273. April 4, 1896.

Sulphides of aluminium are prepared by the action of carbon disulphide on a mixture of anhydrous alumina and the desired metallic salt, which may be either a sulphate, phosphate, or chromate. The salt used and the alumina must be thoroughly dryed and well mixed. A convenient and economical method of obtaining the alumina in the dehydrated form is described. Ordinary sulphate of aluminium is roasted with salt giving Al_2O_3, sulphate of soda and hydrochloric acid gas, wherein lies the economy of the process. Nitric acid or acetic acid may similarly be obtained according to the salt employed. The resulting mass is compact but still permeable by gases, and is mixed with one of the oxygen bearing salts previously referred to. According to the fusibility of the double sulphides more or less of the oxy-salt is used. The mixture is heated in tightly closed retorts, fitted with pipes for introducing the carbon disulphide vapour, and carrying off the excess vapour and liberated gases. The choice of the oxy-salts suggested is controlled by thermo-chemical considerations, in which way the requisite temperature for the reaction is lowered, and the wear and tear of the plant lessened. The necessary temperature depends entirely on the nature of the oxy-salt used and the proportions of the mixture.

Improved Means for Treating Sodium Chloride for the Production of Bleach and other Products. L. Blackwell, 9, Sandford-terrace, Stoke, Newington Common, Middlesex. Eng. Pat. 14,122 July 24, 1895.

Eupion, the liquid product discovered by Reichenbach as resulting from the distillation of animal tar, horns, or bones, is used to liberatse the chlorine in common salt. This peculiar product, it is stated, dissolves chlorine readi ly at the ordinary temperature of the air, and dissolves bromine still more readily. Thirty-one pounds of eupion and 100 lbs. of salt are mixed in a vessel. The solution of chlorine can be run off, leaving the sodium; or carbon dioxide can be blown through, thereby generating enough heat to liberate the chlorine and converting the sodium into the carbonate, leaving the eupion fit for re-use. The chlorine given off is utilised in the ordinary way in the preparation of bleaching agents. Some of the other peculiar properties of this product are that it dissolves iodine in the cold and more quickly by the aid of heat, the iodine recrystallising out as the solution cools. Though phosphorous, sulphur, and selenium are not affected in the cold, they are readily dissolved when the liquid is heated, the whole of the sulphur and phosphorus and part of the selenium being deposited on cooling. It also appears to form some very stable salts.

Improvements in the Treatment and Purification of Sewage and Impure Waters J. W. Slater, 36, Wray-crescent, Tollington Park, Middlesex, and The Native Guano Co., Ltd., 29, New Bridge-street, Blackfriars, London. Eng. Pat. 18,094. Sept. 27, 1895.

This is a modification of the A B C process. The novelty lies in the use of benzoic acid or benzoates in conjunction with clay and peat or other charcoal. The object is to prevent secondary fermentation in effluents. When the effluent is distinctly alkaline, benzoic acid is used, otherwise "benzoate of alumina" is substituted. The latter can be prepared by double decomposition from solutions of sodium benzoate and cake alum. In practice a mixture of clay and carbon is to be added to the sewage, and then from 5 to 20 grains of benzoic acid or benzoate of aluminium are added per gallon. When the effluent is clarified by any of the company's previous patents the benzoic acid or compound thereof can be added to the effluent direct.

Improved Process or Treatment of Waste Materials Obtained in the Manufacture of Ammonium Compounds to Produce a Substance Suitable for Use as a Paper Filling in the Manufacture of Paper. W. Brothers, Higher Clews Chemical Works, Rawtenstall, Lancs. Eng. Pat. 18,503. Oct. 3, 1895.

The product obtained is a mixture of calcium sulphate and carbonate, the latter being in the form commercially known as precipitated chalk. The waste material is that left after decomposing sulphate of ammonia with slaked lime. It contains approximately 20% of calcium hydrate in addition to sulphates. The waste is mixed with water and kept in suspension by agitation in a dash, furnace gases being simultaneously passed in. The carbonation process occupies about six hours.

Improvements in the Manufacture of Soap, Sheep Dips, Hop Washes, and the like. F. W. Saatmann, Driffield, near Hull. Eng. Pat. 15,568. Aug. 19, 1895.

The objection to the customary types of soluble sulphur washes and dips is the presence of a certain amount of sulphides which have an injurious effect on the animals and materials treated.

The special advantages which the patentee claims depend on the following method of procedure:—Ground resin mixed with about 30 % of sulphur is heated up to 120°C., when the sulphur is dissolved and the clear liquid can be drawn off from any sediment that may be left. The clear portion is distilled from a retort at a temperature that must exceed 23°C. The distillate is a combination of sulphur and resin which can readily be saponified by means of either caustic soda or potash. The actual amount of sulphur depends on the kind of resin used.

An Improved Method of Producing Peat Charcoal and Apparatus therefor. O. Rose, 137, Stockwell Park-road, Brixton. Eng. Patent 17,568. Sept. 20, 1895.

A bench of four retorts set in a special way is employed, the peat being passed through them by a continuous or intercepted worm-screw fitted on a revolving shaft. Arrangements are made by which the ammoniacal and pyroligneous vapours given off are collected. The retorts are maintained at various heats, the hottest being 900° to 1,000° F. When this temperature has been reached the peat is fed in and carried by elevators and conveyors through the system of retorts, the resulting charcoal being delivered in a form suitable for the preparation of briquettes. For particulars of the plant employed, the specification and the five drawings accompanying it must be consulted.

Improvements Connected with the Application and Utilisation of the Residual Liquors produced in the Manufacture of Vegetable Parchment Paper. J. S. Rigby, 35, Bagot-street, Wavertree, Liverpool. Eng. Pat. 19 008. Oct. 10, 1895.

Sulphuric acid is a waste product in the manufacture of vegetable parchment in the shape of waste parchmentising baths, and also the much diluted washings obtained in the treatment following the passage of the paper through the acid bath. The former and stronger of these is continuously and repeatedly passed down a tower packed with magnesite, forming Epsom salts and liberating carbon dioxide, which is available for any desirable purpose. The weak acid is neutralised with calcium chloride to produce hydrated calcium sulphate, which after filter-pressing off is ready for packing.

Improvements in the Production of a Substitute for White Lead, and other Oxysalts of Lead, from Lead Sulphate and Lead Chloride. S. Ganelin, 613, Parrish-street, Philadelphia, Pa., U S.A. Eng. Pat 8,981. April 28, 1896.

Chloride or sulphate of lead is partially converted into an oxy-chlorocarbonate, which is used as a pigment. Certain reactions are described n the first part of the patent, which are of interest, though the resulting product is not intended to be used directly as a pigment. For instance, by mixing lead sulphate or chloride and oxide of magnesia into a paste with water corresponding oxy-salts are obtained. To the same end a mixture of lead sulphate, magnesium oxide, and salt may be employed. In the actual process used to prepare the pigment which the inventor intends for a substitute for white lead, caustic soda, salt, sodium carbonate, and lead sulphate are employed. An alternative method, by which

the substitute can be prepared more easily than ordinary white lead, is to act on the oxychloride with sodium carbonate or bicarbonate. The resulting compound only wants filtering off, washing, and drying. Since the oxychloride of lead is used in the above reaction several ways of preparing it are given. One of the most useful is due to the action of salt on lead sulphate and oxide, for which an impure sulphate, known as sublimed lead and containing oxides of lead and zinc, can be utilized, the oxides therein saving the special addition of the same.

Our Book Shelf.

MINERAL RESOURCES OF THE UNITED STATES. Part III. Two vols. By David T. Day. 1,381 pp. with index. Washington, U S A : Government Printing Office. 1895.

These two volumes deal respectively with the metallic and non-metallic products, but for the purposes of reviewing they will be treated as one. As will be seen, they form a very voluminous work. The thoroughness of the treatment necessarily delays the publication somewhat, the returns only covering up to the end of 1894. On the whole, however, the delay is preferable to the comparatively indifferent way the mineral statistics of this country are compiled and presented. It is impossible to deal fully with the mass of figures given, our space only allowing reference to the rise and fall in the production of the chief items of interest.

It appears that the production of iron and steel continues to decrease, and the same applies to coal, though there is a slight increase in coke.

The chief feature about petroleum is that while the total production shows an increase, the consumption has improved so much that great inroads have been made on the stocks at the wells. There is no need on this side to remind readers that the price has also risen. The output of soapstone has risen from about 21,000 short tons to 23,000, but the production of fibrous talc has declined. There is practically no change in the output of corundum and emery. The minerals used for chemical purposes are naturally of greater interest, and under this heading we find that the output of phosphatic rock fell in Florida, but rose in South Carolina. The chief departure of interest has been the appearance of Tennessee among the producing States, this State being considered to have a future with its deposits of high grade phosphates. Gypsum shows a decrease, but salt has been looking up, and is able to show an increase of over two million barrels of 280lbs. each. Sources of iodine have been diligently sought for, but great success has not attended the efforts made. Sulphur keeps on the decline ; but the output of pyrites is progressing satisfactorily, new supplies being developed in North Carolina. The total production of borax rose from 8,699,000 lbs. to 14,680,130 lbs , the whole of which was derived from California and Nevada. Among mineral pigments, barytes proved disappointing, a falling off of about 6,000 short tons having resulted. Both ochres and umbers also show a decline. White lead, however, rose by over 4,000 short tons. The total output of cobalt oxide was 6,763 lbs. Venetian reds and zinc white each declined to a slight extent. The mica industry suffers greatly from irregularities in the methods of mining, and consequently shows a serious falling off. The deposits of asbestos at Casper, Wyo., seem to make little or no progress in their development. The value of the infusorial earth raised is less by half ; but magnesite, which is obtained from California, shows an increase from 704 short tons to 1,440 tons. Considerable attention and space are devoted to monazite, which has become an important mineral with the increased popularity of incandescent gas lighting. The production rose from 130,000 lbs in 1893 to 546,855 lbs. in 1894.

Under metals, platinum receives special attention, which includes the results of the investigation of all the chief platinum bearing ores from all parts of the world. The 50 odd pages devoted to bauxite constitute a very readable article. The output of metallic aluminium continues to increase, the respectable total of 550,000 lbs. having been reached in 1894.

The foregoing will give some idea of the scope of these two volumes, which are excellently got up, and in every way an advance upon the publications of previous years.

COMMERCIAL ORGANIC ANALYSIS. By A. H. Allen. Vol. III. Part III. Second edition. 508 pp. with index and addenda. London : J. and A Churchill. 1896.

On the perusal of this, the third part of the third volume, it can be seen that this excellent work is at last drawing to a close, since the contents deal with a number of the scarcer and less known products and their composition.

This part of Vol. III. is perhaps the least "commercial" of all, but it is nevertheless a most important addition to our knowledge of the preparation and analysis of the rarer vegetable alkaloids, including the non-basic vegetable bitter principles, animal bases and ptomaine, animal acids and cyanogen. By reason, therefore, of its exclusiveness this part of the work, as a whole, attains a peculiar value.

There are several points of interest which should be referred to lest they be overlooked in the masses of other information contained in the work. These are more particularly the alkaloids of ipecacuanha, the analysis and commercial valuation of pepper, the alkaloids of the hellebores, and the volumetric estimation of quinine.

Again we find a most interesting section on the preparation and properties of the glucoside of black mustard seeds—myronic acid, while there is an interesting reference to the active principle of arrow poison. Two prominent sections are those devoted to the assay of jalap and aloes.

Brewers will find much that is instructive in connection with the valuation of hops and their substitutes, as well as in the surrounding paragraphs. Following the methods for the determination of asparagine, there is a section on the modes of occurrence of nitrogen in plants, succeeded by a description of aspartic acid, which is chiefly found in beet molasses. Despite the statement in the preface, there is under urea much that closely resembles the author's recent work on the "Chemistry of Urine." On the other hand there is a lot of new matter introduced, notably the list of references to English and American literature dealing with Knop's process for the estimation of urea, which has been prepared by Mr. A. R. Tankard at the author's request. The chemistry of putrefaction and the preparation of lactic acid also call for special mention.

The last chapter is an expansion of that written in 1879 and has benefited by being brought up to date. It deals with the uses and manufacture of simple and double cyanides, cyanates and thiocyanides.

The volume is certainly in its sphere one of the best portions of the whole work. Though the reader has to traverse isolated and less frequented paths of chemistry, which are of particular interest to those who have devoted themselves to the pathological and therapeutical sides of chemistry, still this volume contains many useful methods of estimating and valuing products which are difficult to deal with, and thus appeals in many ways to the general analyst.

GERMANY AND THE PETROLEUM TRADE.

SOME time ago it was announced that the German Government was carefully considering the question of regulating the trade in petroleum, or, in other words, of finding means to prevent the American corporation known as the Standard Oil Company from acquiring complete control of the German market. (*C. T. J.*, 467, p. 290, and 461, p. 195). Rather more than two years ago an attempt was made by the Standard Oil Company to conclude a contract with the syndicate of Russian petroleum producers with the view of securing immunity from Russian competition in the markets of Western Europe. According to the proposed arrangement, the Russian syndicate would have supplied petroleum to Eastern Europe, Asia, Australasia, and the East Coast of Africa ; while the Standard Oil Company would have had the exclusive control of Western Europe—Great Britain, Germany, Austria-Hungary, Switzerland, France, Italy, Spain, Portugal, Scandinavia, Holland and Belgium. Before accepting the contract, however, the Russian syndicate stipulated that the American company must possess a complete monopoly of the oil trade of Western Europe, that is to say, must buy up, crush, or otherwise destroy all competition. In all the above-mentioned countries, except Germany, the efforts of the Standard Oil Company seem to have been attended with success, and in Germany it has waged a bitter and unscrupulous war of prices for two years past against all independent merchants. The final obstacle to the partition of the world is now stated to have been overcome, for the American monopolists have succeeded in destroying the greater part of the independent German opposition. The Imperial Government is understood to be seeking for some means of combating the company, for the prospect of seeing the price of an important article of trade dictated by an American combination cannot be welcome. It is possible that the importation of Galician petroleum will be facilitated, and an attempt made to impose an almost prohibitive duty upon the American product.

PROTECTION FROM NOXIOUS GASES IN GASWORKS.—The Tynemouth Gas Company have recently provided their men with a useful contrivance for preventing the inhalation of noxious gases, in the form of a respirator made by Messrs. Merryweather, of London, and similar to those used by the London Fire Brigade with such success in the dense smoke at the recent fire at Covent Garden. The same firm have also recently supplied these respirators to Saddler's Chemical Works, Middlesbrough. In continental cities these devices are in regular use for the protection of the firemen when working at smoky fires, and enable good work to be done in cases where otherwise the fumes would be too strong and dense for the firemen unprovided with the respirator to approach sufficiently near the burning material to get water on the flames.

Agricultural Notes.

MIXING FERTILIZERS THE RIGHT WAY AND THE WRONG.

Where artificial manures are used it is well that every care should be taken to prevent loss by injudicious mixing. This matter is frequently referred to in scientific publications, and in the exceedingly useful little journal issued from the Technical Laboratory of the Essex County Council readers are cautioned against making combinations of two or three manures the constituents of which may neutralise each other (as in the conversion of soluble into insoluble compounds), or which may cause waste of fertilising matter by volatilisation. If, for example, manure containing nitrogen, such as that from the stable, is mixed with quicklime the nitrogen is liberated in the form of ammonia, and there is consequently a serious loss. Sulphate of ammonia, nitrate of soda, and phosphate of lime, are described as salts, and they are the product respectively of sulphuric acid and ammonia, nitric acid and soda, and phosphoric acid and lime. The sulphate and the nitrate, however, are neutral salts, while the superphosphate is an acid salt, containing three times as much phosphoric acid in proportion to lime as insoluble phosphate of lime in bones or mineral phosphates. Phosphoric acid combines with lime in different proportions. Thus, there is one combining proportion of lime in soluble phosphate, two proportions in reverted phosphate, three proportions in insoluble phosphate—a form in which phosphoric acid is present in bones and mineral phosphates—and four proportions in basic slag. As superphosphate has only one combining proportion of lime it is changed into reverted phosphate if it is mixed with lime, and the reversion is rapid if the lime used is caustic, or unslaked. As sulphate of ammonia contains ammonia, and as ammonia is a volatile base, it is liberated when the sulphate is mixed with lime or any other fixed base. Similarly, nitric acid is liberated when nitrate of soda is mixed with phosphoric or sulphuric acids. It is possible, therefore, by carelessness to lose the nitrogen in the two most expensive of all manures, and to sustain a loss by the admixture of lime with superphosphates. Basic slag contains lime; therefore a manure containing ammonia should not be mixed with it, and guano, like sulphate of ammonia, is such a manure. We may mix nitrate of soda with basic slag, but we may not mix it with superphosphate, or a loss of nitric acid may occur, although if such a mixture is really essential it is possible that the loss, if any, is very slight when the mixture is broad-casted immediately upon the soil. Mr. Dymond refers to an experiment made by applying a mixture of nitrate of soda and soluble phosphate to two young turnip plants grown in pots. These plants were believed to have failed owing to the destruction of the tissue of the stem just beneath the soil, whereas other plants which had been manured with either nitrate or soluble phosphate alone were quite healthy. It is a somewhat common practice where slag and superphosphate are both used to mix them for application. This, as has already been seen, is a mistake, as slag already contains lime. It is worthy of remembrance that superphosphate loses value by long keeping, inasmuch as there are two bases present, alumina and oxide of iron, which by slow reaction with the acid phosphate convert it into insoluble neutral compounds.

MANURES TO AVOID.

At first sight we might not altogether unnaturally suppose, considering how much has been written and said concerning manures, that with regard to these farmers would not easily be deceived or suffer very material loss, especially as these commodities of excellent quality are now procurable on distinctly advantageous terms from their point of view. When it is remembered what deplorable depression has constituted the chief factor in bringing about this result, we must undoubtedly esteem it almost the reverse of an unmixed blessing, and such a reference leads us, says the *Mark Lane Express*, to instinctively remark that the circumstances of the distressingly pinching times caused by the prevailing excessively low prices for agricultural produce which are, of course, inevitably accompanied with rigid economy, render imperative an explanation showing that perhaps seldom has plain speaking on the questions involved been more urgently needed than now. It is when seeking to curtail expenditure in this unquestionably tempting direction we are likely only too readily to commit some very serious mistake, an apparent gain terminating in actual loss; furthermore, most probably the greatest sufferers will be farmers of small means who necessarily can least afford unprofitable outlay.

In the past we have pointed out some of the more important drawbacks unavoidably associated with the employment of fertilisers in bad or indifferent condition, consequently comment here, upon those undesirable from this cause is superfluous, and concerning the adulteration of superior articles by means of inferior or valueless ones, farmers have, to some extent at least, become awakened; therefore, although, of course, they must still be on their guard, injury from this source is far less prevalent than formerly, but the channel through which serious loss most frequently occurs is found in the practice of purchasing low-priced rubbish possessing no manurial value worth mentioning. The credulity displayed by agriculturists on this point often appears most surprising, for there exist many refuse materials and cheap so-called manures, certainly not entirely devoid of fertilising properties, but affording percentages so small that no one could accept them advantageously at a gift if anything was required for carriage, consequently the smallest charge upon the material obviously becomes utterly unwarrantable. Yet these facts, apparently so simple and self-evident, really seem quite incomprehensible to many agriculturists, who persist in thinking a substance cannot be dear when procured at some very low figure, and imagine under such circumstances they are not likely to go far wrong. Thus, as the victim fails to realise his position, and is himself worthy of some blame, the evil is particularly difficult to check.

It must be clearly understood we do not deny that in a sense the vendors of the low grade materials under notice are entitled to the prices they demand, notwithstanding the trivial proportions of plant food present are procured on an exceedingly extravagant basis, only as a matter of fact the nominal cost is far below any sum for which we could reasonably expect to secure higher class products, and on this account buyers can hardly feel astonished if they meet with disappointment, because the general rule which teaches that to ensure obtaining good value for our money fair prices must be paid applies here as elsewhere. Practical men should ever bear in mind an especially important matter which receives most inadequate attention; we refer to the fact that the small amount of valuable ingredients existent in poor manures is not even relatively so useful as that provided by others of a superior description, owing to the large bulk of inert unserviceable substances constituting a serious drawback and greatly diminishing their comparative merit, thereby virtually destroying whatever market value they might otherwise legitimately claim.

From time to time materials, professedly manures, are met with which, while quite as deficient in fertilising constituents as the foregoing, deserve far stronger condemnation, because through various misleading artifices absurdly excessive prices are obtained for them, and continually inferior mixtures are sold at the cost prevailing for the best class of goods. Thus it is not at all uncommon to come across instances of farmers buying what they suppose to be satisfactory fertilisers, and full value for money, at prices twice, three times, and more their real maximum worth. Manifestly, therefore, agriculturists must in such matters exercise great caution regarding taking anything for granted; also it is necessary to perfectly apprehend that nobody, whether farmer, chemist, or anything else can possibly ascertain the quality of manures by tests so purely superficial as appearance, smell, feeling etc.

Another very essential consideration for manure purchasers to remember when drawing conclusions relating to the action and profitableness of what they have procured, is that indifferent commodities may easily acquire a spuriously favourable reputation, as not infrequently sufficient plant-food, in fairly available condition, is present, if opportunely applied, to produce some perceptible effect upon crops, the farmer congratulating himself accordingly, and forgetting that better results would be more economically forthcoming by employing really reliable manures. One of the chief protections within a farmer's reach against losses of the nature we have mentioned, whether originating in the misdoings of either unscrupulous or ignorant dealers, is to obtain his supplies from persons whose standing may be relied on; moreover, he ought to secure a written guarantee of quality, and as a further indispensable precaution to ensure complete protection a sample of the manure should be submitted to a competent chemist for analysis, as the confidence inspired by this simple and efficient expedient infinitely outweighs the trifling trouble and expense incurred.

THE GLASGOW GAS COMMITTEE AND RESIDUALS.—The accounts of the Corporation Gas Department for the year ending 31st May, show that the gross revenue was £605,794., and the gross expenditure £472,844., to which is added depreciation written off capital £66,156., leaving as the balance carried to profit and loss account £66,793. The committee had to meet the following requirements during the year:—Annuities on stock, £33,603.; interest on borrowed money, £27,486.; and sinking fund, £2,200.—leaving a surplus on the year's operations of £502, to which add the balance from last year £120., and the surplus on electric lighting account £2,381., making £3,003.—out of which the committee have transferred to fire insurance, &c., fund a sum of £3,000., leaving a balance to be carried forward of £3. The committee's anticipation of a reduction of income from residuals for the past year has, unfortunately, been realised, the markets therefor having been unfavourable during that period. The reduction from this source is—for tar and liquor, £13,000.; and for coke, £5,000.; a total decrease of £18,000. The average received for tar and liquor was 2s 6·67d. per ton of coal carbonised, as compared with 3s. 3·63d. for the previous year, and for coke 5s. 1·98d., as compared with 5s. 5·23d.

Reports of Companies.

BRUNNER, MOND, & CO., LIMITED.

CAPITAL TO BE INCREASED TO £3,000,000.

The thirty-first half-yearly general meeting of the shareholders of Brunner, Mond, and Co., Limited, was held on Friday, the 21st inst, at Liverpool, Sir John T. Brunner, Bart., M.P., the chairman of the Company, presiding.—The Chairman, in moving the adoption of the report and balance-sheet for the half-year, said the shareholders would notice in the profit and loss account an item of £18,518. 17s. 6d, profit on sale of investments. A number of the investments which the Company held had advanced greatly in value, and the directors considered that it was not good business to hold them at their existing price. In the report they would observe that the directors proposed to place to the reserve fund the sum of £18,658., which was £140 more than the profit on the sale of investments. The reason why they proposed to put to the reserve fund an amount slightly higher than that shown as the profit on the sale of investments was that they were expecting within a few weeks to receive on account the 7,906 preference shares to be issued at £7. premium, which would give an amount of £55,342. If they added together £18,658. and £55,342. they would find that they got a round sum of £74 000., which, if it was added to the £442,000., at which figure the reserve now stood, would give a reserve fund of £516,000 They would have seen at the end of the report that the directors proposed to write off the patents account £500. only, instead of the usual £2,500., because they did not like to let it appear to the shareholders that their patents were of so small a value as they would appear to be if £2,500. was written off. In their opinion these patents were very valuable, and of very much higher value than that at which they stood on the 30th of June, namely, £9,702. They would notice that the small amount of £127. had been added to the freehold land item in the balance-sheet, and that a much larger amount, namely £45,984, had been added to the cost of the alkali works. That item of additions to the alkali works had been spent at Silvertown in the main and at Winnington, and at both of those places very largely for the manufacture of caustic soda. Sir John concluded by moving that the report be adopted, and that a dividend of 30 per cent. be declared on the ordinary shares of the Company and of 7 per cent. on the prererence shares.—Mr. Coghill seconded the motion, which was unanimously adopted.—It was decided that the directors (other than the managing directors) should be paid the sum of £600. for their services during the half-year. Messrs. T. W. Read and Co, chartered accountants, of Liverpool, were appointed auditors of the Company.

AN EXTRAORDINARY GENERAL MEETING

of the shareholders was afterwards held, Sir John T. Brunner again presiding, for the purpose of considering and passing a special resolution carrying out certain alterations in the articles of association.—The Chairman, in moving the adoption of the special resolution, explained that the first alteration was to increase the nominal capital of the Company from two millions to three millions. The reason for their proposing this was that after the 7,906 new preference shares were taken up the two millions would be exhausted. It might seem to some of them a big jump from two to three millions, but it was only a matter of paying a little sooner than might possibly be the case the £1. per thousand duty to the State. The next alteration was merely formal, and authorised the directors at their discretion to issue shares with or without a premium up to the nominal amount of unissued capital. He had no doubt their experience was that whenever capital had been issued, the shareholders had been treated with scrupulous fairness, and they might rely upon it that in any further issue of shares all the shareholders would be treated equally with that fairness which they had experienced hitherto. The last alteration in the articles to which he would call attention was perhaps the most important, and it provided that a balance-sheet would only be issued once a year instead of half-yearly as hitherto. The reason for the change was simply that with the great extension of their business they found that the tax upon their staff of taking stock twice a year was more than they ought to put upon them. Their desire was to take stock only once a year, and to issue a balance-sheet and report only once a year as from the 31st March in each year.—Mr. Galloway seconded the resolution, which was adopted.—In acknowledging a vote of thanks, the Chairman said he had expected that a question would have been asked as to whether there would shortly be a call upon the shares now at £3 10s. paid. They were aware that the alkali trade was in a very depressed condition, and that being the case great exertions were necessary on the part of the directors to maintain the dividends. It was better, therefore, from their point of view not to ask for money which would water the dividend at present, but rather to get money as they were proposing at the rate of 4 per cent by the issue of preference shares. When they saw the prospect of making 30 per cent. out of every £1. that they called for from the shareholders, they might depend upon it that in their interest and in the directors' own interest a call would be made, but it was not business to take up money at 30 per cent. at a time when the market prices were so low.

BLUE ASBESTOS.

THIS mineral fibre is found in inexhaustible quantities upon extensive farms in Cape Colony which have been acquired by the Cape Asbestos Company, Limited, 8, Minories, London, E.C. It differs from the varieties of asbestos known to commerce, such as Italian, Canadian or Russian, in that it is blue in colour, is considerably lighter, and is found in veins of greater and more uniform width, yielding a longer and stronger fibre. The difficulties incidental to the manufacture of a new and untried material have now been overcome, and the Cape Asbestos Company, by altering and adapting machines designed for treating Canadian asbestos, and by erecting new machinery, now obtain excellent results. Their fibre can now be so well opened and carded as to produce a wool of quite half the specific gravity of the finest wool obtainable from other asbestos. This wool is capable of being spun into very fine yarn of great tensile strength, which can be woven into cloth or made into netting, twine, ropes, and cordage of all kinds, little inferior in tensile strength to similar articles made from vegetable fibres, but possessing the advantage over these of being uninflammable, rot-proof, and unaffected by atmospheric or climatic influences, being, in short, unchangeable by time and imperishable by decay. Such properties render it certain that this material will find applications in many directions where asbestos as hitherto known has been unsuitable on account of its insufficient tensile strength; whilst for the ordinary technical purposes to which asbestos is usually applied, such as steam packings, jointing materials, non-conducting coverings, &c, blue asbestos fulfils every requirement. As a non conducting material it certainly has many advantages, and in the form of mattresses and ropes filled with blue fibre for covering boilers and steam pipes, it forms a removable covering, the superiority of which over the ordinary cement coverings now in use must be convincing to every practical engineer.

It is our intention to deal at present more particularly with the

ASBESTOS ROPES,

and also subsequently with asbestos bedding.

The scope for a practically imperishable, fire, acid, and rot proof ropes in the chemical trade is obviously so extensive that we need not dilate thereon, but can pass at once to the consideration of the claims and advantages of such ropes.

Mr. Johnson, writing of his experience with them in his own well known firm (Johnson and Hooper) says:—"My firm have continuously used the asbestos rope had from you three months since, and it has given entire satisfaction. My firm have not subjected the rope to any scientific tests, but, from a practical point, it has been severely tried—one day thrown aside in the wet, another in contact with dilute sulphuric, muriatic, and nitric acids—placed near a furnace the next day to prove its capabilities against extreme heat, immersed in a water tank for twenty-four hours and so on. It has been in use all the time, and I may say that any ordinary rope placed under such circumstances would be useless in the time. Yours, however, is still 'alive.'"

It will thus be seen that these mineral fibre ropes will remain unaffected by exposure to influences that speedily destroy ordinary ropes of organic material. Changes from wet to dry conditions of use, or from extreme heat to extreme cold, have no effect upon blue asbestos ropes, nor has contact with acids, alkalies, or chemical fumes. Insects also will not touch blue asbestos. In India and other hot countries, where ants frequently destroy cordage (as indeed all organic substances), blue asbestos will defy their ravages.

Such qualities suggest many uses for blue asbestos cordage, in substitution for ordinary cordage, where the conditions of use are unfavourable to durability.

Among such uses is notably that of driving ropes in chemical works, in place of leather or other belting, and indeed for all purposes about such works where it is found that ordinary ropes soon perish.

They are also well suited for use in acidiferous mines and for positions where ordinary rope could not be used on account of being exposed to excessive heat.

The rope is made in various sizes, which from the samples we have inspected prove to be of convenient proportions.

One of these samples was a piece of a ¾in. diameter rope (2·35in. circumference) which, when suspending a dead weight of 2cwt., stood the action of a gas burner playing upon one spot for 22 hours before breaking.

These blue asbestos ropes are somewhat lighter than similar Russian hemp ropes, and have a tensile strength about two-thirds that of hemp. This, however, is when *both* are new. But the peculiarity of the asbestos rope is that its strength will remain unimpaired during long usage under conditions which would deteriorate the other and necessitate its frequent renewal.

Before concluding we must briefly refer to what is, we think, a decidedly ingenious application of asbestos, namely, for the preparation of bedding. Being comfortable as a good mattress, and furthermore insect and germ proof, it affords many and almost invaluable advantages to infectious hospitals, &c., as well as commending itself highly for hygienic reason for all ordinary uses, being warm in cold weather and cool in hot.

SULPHIDES IN CALCIUM CARBIDE.

[By F. J. Pope.]

IN a paper communicated to the American Chemical Society the author makes the following preliminary suggestions for the estimation of sulphides in carbide of calcium: A weighed quantity of calcium carbide is conveyed to a dry Erlenmeyer flask provided with a stop-cock funnel and a delivery tube, which latter leads to a ten ounce wash bottle, this in turn being connected with a smaller one. The wash bottles contain 150 cc. lead acetate of known strength (about tenth normal). By means of a stop-cock water is carefully added until there is no further evolution of acetylene. On the reaction ceasing, 25 to 40 cc. sulphuric acid (1 : 3) was run into the flask and the whole gently boiled, the liberated hydrogen sulphide passing into the wash bottles and precipitating the lead as lead sulphide. When the reaction has ceased the flask and liquid are washed free of hydrogen sulphide by a current of air and the contents of wash bottles filtered. The filtrate containing unconsumed lead acetate is made up to a half litre. To 100 cc. of this solution standard potassium bichromate, arsenious acid, etc, are added and total amount of unconsumed lead acetate estimated. The difference between this amount and the quantity of lead acetate started with gives amount precipitated by the H_2S, from which the sulphur existing as sulphide can be calculated. In two experiments 3·37% and 3·57% of sulphur were found on the two respective quantities of 2·4492 grams and 3 1234 grams taken. The method has not been checked, and the carbide may evolve other products which remove lead from the solution. The author, however, purposes investigating this and other points bearing on the reliability of the method.

THE VOLUMETRIC ESTIMATION OF LEAD.

A CONVENIENT and reasonably accurate method of estimating lead volumetrically has been proposed by Mr. F. J. Pope, the chief advantage of which is the avoidance of the use of an outside indicator. The principle of the process is that the lead is converted into lead sulphate and then into the acetate. The lead is then precipitated as chromate by an excess of standardised bichromate, the excess of which is reduced by standard arsenious acid, titrating back with iodine solution and starch paste.

Taking tenth normal solution of iodine as the standard, 4 995 grams of arsenious acid per litre and 4·763 grams of potassium bichromate per litre give standard solutions of equivalent value per equal volumes.

Iodine.—12·7 grams are dissolved in concentrated potassium iodide solution and made up to one litre.

Arsenious Acid.—Dissolve 4·95 grams in 20 or 30 cc of saturated, filtered solution of sodium carbonate, gently warming. If too strong heat is applied the arsenious acid cakes and dissolves with difficulty.

By means of a burette acurately measure 10 to 15 cc. of arsenious acid solution, running it into a large porcelain dish. Acidify faintly with sulphuric acid, add 50 cc. saturated solution of pure sodium bicarbonate, add starch paste and titrate with the iodine.

Potassium Bichromate.—Weigh out approximately five grams, dissolve and make up to one litre. Remove 25 cc. to a porcelain dish, add fifty cc. of the standard arsenious acid and proceed with titration as already indicated.

Note.—Since all commercial sodium bicarbonate will decolourize more or less iodine, it is well in neutralizing to get the neutral point exactly. When this is attained, add fifty cc. sodium bicarbonate and deduct its iodine value from the quantity consumed.

The Operation in Detail.—Take from three to seven grams of ore, according to its richness in lead. Place this in a deep three-inch porcelain dish, thoroughly moisten it with water, cover the dish with a watch-glass and for each gram of ore used add four to five cc. of a previously prepared mixture of two parts by volume of sulphuric acid, three parts by volume of nitric acid and one part by volume of water. When the reaction, which first results, diminishes, evaporate as nearly to dryness as is possible without spurting. Cool, fill the dish with cold water, stir well and allow to settle for two or three minutes. Filter and wash with cold water until most of the acid is removed. Convey the filter paper with the precipitate to a 300 to 400 cc. beaker or Erlenmeyer flask and neutralize any remaining acid with dilute ammonia. To the porcelain dish add 10 to 15 cc. strong ammonium acetate, made decidedly acid with acetic acid. Add an equal volume of water and boil for two or three minutes, washing the sides of dish so as to remove any remaining lead sulphate. This solution is then added to the flask containing the precipitate and the whole boiled from seven to ten minutes with frequent stirring. Cool, neutralize with ammonia, add 100 cc. of standard potassium bichromate, stirring well. Filter into a half litre measuring flask, moistening the filter paper with dilute ammonia or ammonium acetate. Wash precipitate as much as is possible in the flask, using hot water. The filtrate make up to the mark, and for titrating remove 100 cc. to a large one and one-half litre porcelain basin. Add 10 to 20 cc. (or less if ore is rich in lead) of standard arsenious acid. Make decidedly acid with 40 per cent. sulphuric acid and stir until the yellow colour disappears or the liquid has a greenish tinge. A large excess of sulphuric acid is to be avoided. Neutralize with saturated solution of sodium bicarbonate and then add an excess of 50 cubic centimetres. If the solution has a deep greenish tinge dilute it with distilled water. Finally add starch paste and titrate back with standard iodine solution.

THE CHEMISTS' EXHIBITION.

THIS exhibition, organised by the *British and Colonial Druggist*, opened on Monday at the National Skating Palace, Argyll-street, London, W. The building is handsomely upholstered and decorated, and peculiarly adapted for a display of this kind. The number of exhibitors is about 100, and includes among others the following:—Acme Chemical Company, Limited; Blackfriars Photographic and Sensitising Company; Blackman Ventilating Company, Limited; Bleasdale, Limited; Bristow, T. F., and Co.; British-American Ball Nozzle Company; British and Colonial Druggist (Offices); British and Colonial Druggist; British and Colonial Druggist (Book stands); Burroughs, Welcome and Company; Cartwright, A. S.; Chemists' Aerated and Mineral Waters Association, Limited; Churchill, J. and A.; Cresswell Brothers and Schmitz; Crown Perfumery Company; Defries, J. and Sons, Limited; Evans, Gadd and Company; Ford, Shapland and Company; Foster, F.; Gardner, W., and Sons; Glendenning and Sons; Ingram and Royle, Limited; Iron and Steel Plant Company, Limited; Jewsbury and Brown; Llewellins and James; Lloyd, Howard and Company; Lowe, B., and Company; Maw, Son and Thompson; Midgley, C.; Oppenheimer, Son and Company, Limited; Parke, Davis and Company; Poths and Company; Roessler and Company; Salt Union, Limited; Sanitas Company, Limited; Sharp Bros Soap and Perfumery Company, Limited; Southall Brothers and Barclay; Sutton, W. and Company; Tidman and Son, Limited; Volcanic Æration Company; Whittaker and Company; Wyleys, Limited. There has been a large attendance of the trade, and the exhibitors express themselves highly gratified with the business done and the amount of interest taken in the exhibition. On the whole it is a great advance on the initial, but successful, effort of last year. The exhibition closed yesterday.

Trade Notes.

The Algerian Phosphate Deposits.—According to despatches from Paris, several of the Departmental Councils have adopted resolutions expressing the hope that the concessions for working phosphate deposits in Algeria granted to English companies will be rescinded.

"Salamander" Fire-Proof Decorations.—We referred some little time ago to the asbestos fire-proof wall, ceiling and panel decorations being introduced by the United Asbestos Company, Limited, Dock House, Billiter-street, E.C. This firm has now issued a tastefully got up catalogue of these their latest productions, showing about sixty different designs for ceilings, and wall and door panels, all of which are good, while in some the sharpness of the relief is as striking as the design is beautiful.

Singular Accident with Ammonia.—An accident of a peculiar character occurred last week at Mr. Palethorp's sausage factory, near Dudley Port railway station, Tipton. John Rodway (34), Salop-street, Dudley, labourer; William Harthill, bricklayer, employed by Messrs. W. H. Whittaker & Co., Dudley, who are carrying out alterations at the manufactory; and James Leech (45), Park-lane, Tipton, an engineer, were engaged in the new engine house, where there is a pipe through which ammonia and air are forced, when the pipe burst. The contents were scattered all about the compartment. By leaping through the window Harthill escaped and gave an alarm, but Rodway and Leech were almost suffocated by the fumes which arose from the place in a dense cloud. Leech, although almost unconscious, crawled from the place. Assistance was rendered, and the injured men were conveyed to the Guest Hospital, where they were detained.

THE BRITISH ASSOCIATION.—A meeting of the British Association Local Executive Committee was held in Liverpool on Thursday last week, under the presidency of Mr. E. K. Muspratt. Proofs of the official handbook were submitted. Professor Herdman stated that he had not yet received a reply to the invitation sent to Dr. Nansen.

BRITISH ALUMINIUM COMPANY AND CALCIUM CARBIDE.—We learn that the Acetylene Illuminating Company, Limited, of No 63, Queen Victoria-street, E.C., have concluded arrangements with the British Aluminium Company, Limited, by which they will be able to erect works of several thousand horse power for the manufacture of calcium carbide — using water power. Pending the construction of such works, the Acetylene Company have obtained the use of a considerable portion of the spare water power of the existing works of the British Aluminium Company at Foyers; and a carbide plant is now being erected there, which it is expected will be in full work during the month of October next. The Acetylene Company hold an exclusive licence for the United Kingdom, under the Willson patents, for the manufacture of calcium carbide, and also an exclusive licence under numerous patents controlled by the British Aluminium Company.

"NATURAL" SCIENCE.—Travellers report that in Algeria there exists a small stream which the chemistry of nature has turned into ink. It is formed by the union of two rivulets, one of which is very strongly impregnated with iron, while the other, meandering through a peat marsh, imbibes large quantities of gallic acid. Letters have been written with the natural compound of iron and gallic acid which forms this small yet wonderful stream. The following however is not quite so feasible and decidedly ambiguous:—The Rio de Vinagre, in Columbia, is a stream the waters of wh ch, by admixture with sulphuric acid, become so sour that the river has been appropriately named the Rio de Vinagre, or Vinegar river. It is not clear whether the river is accidentally acidulated with sulphuric acid, or whether the addition of the acid is necessary to develop its acidity. If the latter, the sulphuric acid alone is quite sufficient, without the water possessing any peculiar inherent property of its own.

CULTIVATION OF CUTCH.—A question of no little interest to North Country dyers is now engaging the attention of the Indian provincial Governments in consultation with the forest administration. This is the question of the best method of preserving the cutch tree from extermination. At present the area under cultivation is encroached upon by the peasants right to cut firewood and the like, and no attempt to reconcile the two interests has been hitherto successful. It was suggested that brushwood and cutch acacia crops should be grown in rotation, but the project was found to be hopelessly complex, and the decision which it is believed has just received the sanction of the local executive is to increase the cutch reserves and to grant common rights to the native population in all unreserved forest areas. The pinch is not being felt by buyers this season, because the stocks both here and in Liverpool and Dundee are very large, and the small sales that have taken place in London during the last few days have fetched very poor prices. But it is as well to understand that the supplies in the near future depend upon the continuous watchfulness of the forest conservators in India, and it is gratifying to know that they are not shirking the task.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are very firm, and prices are reported as having further advanced to 4s. prompt for 90's, and 3s. for 50/90's. For delivery over next six months prices are equally steady. There is no change in carbolic acids either as regards prices or position. Naphthas are stronger, there being a small advance in solvent to 1s. 6d, crude standing at 11d. to 1s. Creosote and anthracene unchanged. Pitch quiet, at 32s., f.o.b. East Coast.

Sulphate of ammonia has been in rather better demand, presumably on account of the lowering of prices. The uncovered requirements of dealers have also tended to steady the inquiry. London outside makes are quoted £7. 12s. 6d., Liverpool £7. 15s, Hull £7. 12s. 6d., and Leith £7. 11s. 3d. In forward position Beckton is now offering at £8 Oct-Dec.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali market there is scarcely any perceptible movement in values of the leading products. The tone of the market is, if anything, rather better, and more business is being done both for spot and forward delivery for home trade requirements. Bleaching powder, £6. 10s. to £6. 15s., f.o.r., and the same price taken f.o.b. for export casks. Ammonia alkali, 58%, steady, at £3. 7s. 6d., bags, f.o.r. Soda cry unchanged. Caustic soda on the whole is a turn easier for prompt forward, but differences in prices are only fractional, and nearest qu tions may be taken as last reported, viz:—f.o.b. Liverpool, 77%, 5s.; 74%, £8. 5s.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. net per 10-ton lots and upwards. Chlorate of potash 4⅜d.; soda, 5¾d. per less 5% and 6%. Price of sulphur has still an upward tendency, now quoted £4. 10s. per ton. Nitrate of soda remains steady 7s. 10½d. Saltcake, 21s. per ton in bulk. For borax, the demand slack, and price maintained at £20. There is no change in position of brown and grey acetates of lime, which continue to se £4. 2s. 6d. and £7. 15s. per ton respectively, c.i.f. United King ports. Acetate of soda, £14. to £14. 10s per ton. Acetic acid, 8s. 6d. per cwt. White powdered arsenic unaltered, at £22 7s to £22. 10s. per ton. Sulphate of copper remains steady £16. 5s., f.o.b. For green copperas there is a continued demand, and price firmly maintained. Nitrate of lead rather ea Carbolic, crystals and liquid, are reported quiet and unchanged values.

REPORT ON MANURE MATERIAL.

The dullness in the market, which has had to be chronicled w after week for so long, must again be recorded. There is stil improvement in any position.

The quotations for 75/80% Florida phosphate 1896/97 co shipment season is 6d per unit, in cargoes c.i.f. to good U.K. ports, the greater difficulty experienced in obtaining easy freight is mak shippers less disposed to make concessions than was the case recen The quotation for South Carolina River rock remains 5d. per unit, this is probably the nearest value. Shippers of 58/63% Algerian w go on at 5d. per unit for early shipment, but for shipment ahead 5¼ required.

There is nothing doing in River Plate bones, buyers refusing entertain business at prices asked for shipment, and being in indifferent about buying at all at present. There would be seller crushed Kurrachee bones at £3. 12s. 6d. per ton. Kurrachee b meal for shipment may be had at £3 12s. 6d. per ton, and this p would probably do for ordinary quality Bombay. On spot, £3 per ton is asked for fine Bombay, but buyers don't respond at price.

Nitrate of soda remains quiet in all positions. On spot, 8s per c is the quotation for fine, and 7s 10½d. for ordinary quality. Carg afloat are less enquired for and the nearest value of ordinary qual due or near at hand, is probably 7s. 9¼d. per cwt.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron, better: Scotch warrants closed 46s. 4½d.; Middlesbrough, 37s. 9d. cash, and hematite, 47s. Copper, quiet: Chili bars, G. O. B.'s and G. M. B's., closed £47. 1s. 3d to £47. 6s. 3d. cash, and £47. 2s 6d. to £47. 7s. three months. Tin, quietly steady: Straits closed at £59. 10s. £60. cash, and £60. 1s. 3d. to £60. 11s. 3d. three months; Australi £60. 10s. to £60. 15s. English ingots, £63 to £63. 10s. Lead, steadi Spanish, £10. 17s 6d.; English, £11. to £11. 2s. 6d. Silesian spelt ordinary, £17. 3s. 9d. Nickel, 1s. 2½d. Antimony, £29. to £29. 1 Quicksilver, steady: First hands, £6. 10s.; second hands, £6. *Copper shares*, steady: Cape, 2⅜ to 2½; Copiapo, 2⅜ to 2 Libiola, 2⅜ to 2⅝; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 22 to 22⅜; Tharsis, 5⅜ to 5⅝.

GLASGOW, WEDNESDAY.—Market a shade firmer, with go business. Scotch done at 46s. 4½d., 46s 5½d, and 46s. 5d. ca also at 46s. 6d., 46s. 7½d., and 46s. 7d. one month; closing w buyers at 46s. 4½d. cash, sellers ask 46s. 5d. Cleveland done 37s. 9d. and 37s. 10d. cash, also at 37s. 10d. one month; closi with buyers at 37s. 9d. cash, sellers ask 37s. 9½d. Cumberla hematite done at 47s. 4½d. cash, also at 47s. 6½d. and 47s. 7 one month; closing with buyers at 47s. 4d. cash, sellers ask 47s. 5 Middlesbrough hematite closes with buyers at 45s. 2d. cash, selle ask 45s. 3½d.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil keeps steady. Holders are steady and keep th offerings light. Sales however are scarce, and the tone is virtual being maintained at the expense of business. Olive is firm, particular Spanish, which is moving well. For Malaga an advance is so demanded, prices ranging from £30. 10s. to £34. 10s. per to Linseed is quiet and easier at 17s. 3d. to 19s. per cwt. for Liverpo

makes in exp rt casks. The market closed steady. There is no alteration in cotton seed, Liverpool refined is still quoted 15s 6d. to 16s., and American is offered at 16s. to 16s. 6d. per cwt., according to quality and quantity. With the exception of ex-quay sales good seconds castor oil is unchanged. The quotations are 3⅛d. to 3¼d. store and 3d. ex-quay. In first pressure French however is distinctly easier at 2½d ex-quay, ex-store 2 $\frac{3}{16}$d. to 2¾d. per lb Tallow is well maintained in price but the demand is flagging somewhat. Though there is no change in the prices of resin, with the exception of a moderate inquiry for common, the demand has slackened Spirits of turpentine are the turn lower at 19s. 3d. per cwt. Petroleum is firm without change in quotations, American standing at 6¼d. to 7½d., and Russian refined 5½d. per gallon.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, Tuesday.

A number of transactions in sulphate of ammonia at £7. 11s 3d, spot Leith, were passed towards the middle of last week, but matters have very slightly improved since, and buying is not quite so readily done now at that price, most sellers holding for £7. 12s. 6d. Still, the continental correspondents of Glasgow market operators continue to give expression to views (as to price) which are lower than ever before, and on the whole the outlook, from the makers' point of view, is as dull as may be. Chemicals generally, with the exception of sulphur, perhaps, which continues scarce, are if anything rather easier than otherwise, and 74° caustic soda is quoted cheaper by some sellers. Soda crystals are also a shade easier, and sulphate of copper tends to the favour of the buying side. In paraffins the price of spirit (naphtha) goes up to 7½d. for the season, by agreement amongst the producers, as from September 1st, and already some forward contracting has been fixed. Lubricants (mineral oil) continue steady, particularly as regards the higher gravities.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 22s. 6d.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 1½d.; sulphate of ammonia, £7. 11s. 3d. to £7. 12s. 6d. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 10s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2½d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £4. 15s., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

HULL PAINT, OIL, AND COLOUR REPORT.

Tuesday.

OILS.—The trade is flat with nothing passing of any importance; the difficulty appears to be, amidst so much fluctuation in prices, to give quotations with anything like confidence. A steamer is due here on the 8th prox. from Philadelphia, with a cargo of 1,250,000 gallons of petroleum. The principal imports here to date have been: Linseed, 433,457 quarters against 351,163 quarters a year ago; Rapeseed, 69,788 quarters against 95,690 quarters; Cottonseed, 102,454 tons against 114,856 tons; Olive oil, 13,650 casks against 8,485 casks; Rape oil, 2,583 casks against 5,483 casks; Tallow, 45,419 cwts. against 9,201 cwts.; Turpentine, 11,441 barrels against 12,761 barrels. Linseed oil, after many "ups and downs," at the time of writing closes firm, spot, 15s. 3d. naked; forward, last four months 15s. 6d., first four months 15s. 9d., and May-August 16s. 3d. Boiled and refined £1. to £2. per ton extra. Export for the week has been 2,560 cwts. Refined cotton oil about 7s 6d. per ton lower on the spot, closing with buyers at 13s. 3d.; forward, September-October 13s. 6d. buyers, Nov.-April buyers 13s. 7½.; casks £1. and ordinary barrels 30s. per ton extra. Export of refined 4,000 cwts. for the week. Castor oil firm at 2¾d. per lb. Olive oil (Malaga) is quoted £29. at port of arrival. Turpentine firm 19s 6d. to 20s. per cwt. Cod oil £17. to £20. per ton. Belgian oleine £18 to £19. per ton. Olive oil soap, 60%, £18. per ton. Brown Yorkshire grease £8. Herring oil £13. Boiled siccative oil £10. 10s. in barrels.

CAKES.—Linseed cakes quiet: 95% pure, £5. 12s. 6d.; Russians £5. 5s. to £5. 7s. 6d., Americans £4. 17s. 6d. to £5., Oil cakes £4. 12s. 6d., Cotton cakes not much doing; best makes, £3. 17s 6d., seconds, £3. 12s. 6d. spot, Nov.-April, best makes, £3. 10s.

PAINTS.—The situation is unchanged. Prices are: Dry mineral colours from £3. 10s. to £8. per ton. Barytes from 40s. to 50s. per ton in bags. White and red leads unchanged. Oxide of zinc from £23. per ton. Black, blue, green, yellow ochre, venetian, and oxide of iron in oil from £11. per ton. Paint remover £1. 5s. to £1. 10s. per cwt. Imperial black varnish £5. 10s. per ton, in barrels, free.

TYNE CHEMICAL REPORT.

Tuesday.

There is a slight improvement in the general demand for chemicals, though prices remain unaltered. Sulphur is firm £4. 15s., f.o.b Tyne, Soda crystals £2. 2s. 6d. per ton, gross weight, locally. Caustic 76/77% £9 to £9 5s., and 70% £7. 10s. to £7. 15s. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s. per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. 6d. per ton, f.o.b. Tees.

COALS.—Trade continues steady, with a good demand for best Northumbrian steam and bunker coals. Coke is also firm and in full consumption, locally and for export. Best Northumbrian steam, 8s. 6d. to 8s. 9d. per ton; second qualities, 7s. 6d. to 7s. 9d. per ton. Small steam 3s. 3d. to 3s. 6d. per ton. Bunker coals 6s. 3d. to 6s. 6d. per ton. Household coals 10s to 11s. per ton. Coke firm 15s. to 16s. per ton.

New Companies.

Magnolia Antifriction Metal Company of Great Britain, Ltd. Capital £1,000, in shares of £1. each. This company has been formed to carry on the business of manufacturers of and dealers in Magnolia Antifriction metal and alloys, &c.

Straits Settlements Ramie Fibre Company, Ltd.—Capital £50,000., in 48,250 shares of £1. each, and 35,000 shares of 1s. each. This company has been formed to work the Macdonald-Boyle process for treating rhea fibre or China grass. The subscribers to the memorandum of association are:—R. J. Broadbent, 33, Royal Exchange, Manchestet, agent; F. H. Bowman, Knutsford, Cheshire, engineer; J. Wade, Alina-terrace, Manchester, C.E.; J. MacCullum, 11, Mosley-street, Manchester, merchant; T. S. Scarborough, J P., Halifax; W. J. Rostron, Lyndhurst, Whitefield, spinner; J. S. Pixton, 12, Half Moon-street, Manchester, broker.

Tait Pulp and Paper Manufacturing Company, Ltd.—Capital £40,000., in £1. shares of which 650 are founders'. This company has been formed to acquire a certain secret process for the manufacture of paper and pulp, and to adopt an agreement between J. Tait and H. W. Mayhard. The subscribers to the memorandum of association are:—J. Tait, Kilburnie, Ayrshire, N.B., merchant; H. Powis, Lime Tree Cottage, Putney, gentleman; H. W. Maynard, 22, Budge-row, E.C., agent; E. H. E. Fletcher, 168, Strand, W.C., auctioneer; R. Fletcher, 39, Arlingford-road, Tulse Hill, art dealer; H. G. Quick, Sandown Park, Wavertree, Liverpool, broker; W. H. P. Hendry, Fawe Park-road, Putney, agent.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending August 15th.

Acetate of Lime—
U. States, 820 bls. Johnson & Hooper

Acetic Acid—
Sweden, 48 pks. Fuerst Bros.
Holland, 101 A. & M. Zimmermann

Acetone—
Holland, 1 ck. R. W. Greeff & Co.
" 6 pks. G. Rahn & Co.

Alkali—
Germany, 100 c. J. Barber & Co.
" 200 Spies Brs. & Co.

Alum—
Holland, 140 cks. Ohlenschlager Brs.

Antimony Ore—
Japan, 10 t. R. Warner & Co.
France, 1 H. Johnson & Sons

Asbestos—
France, £20 Girard Frs. & Co.
Germany, 24 Craven & Co.
Canada, 415 W. Byford

Barytes—
Holland, 20 cks. Union L. Co., Ltd.
" 24 R. W. Greeff & Co.
" 67 J. L. Lyon & Co.
" 43 Robertson & Co.
Belgium, 34 brls. W. Harrison & Co.
Germany, 50 sks. Ross & Deering
Belgium, 841 pks. J. L. Lyon & Co.
Holland, 145 78 cks. W. Harrison & Co.

Bromide of Iron—
Germany, 5 pks. A. & M. Zimmermann

Camphor—
Germany, 2 pks. T. H. Lee

Caoutchouc—
France, 32 c. Burnett Brs. & Sons
Zanzibar, 79 L. & I. D. Jt. Co.
Madagascar, 15 Procter Brs.
Germany, 71 Wallace Brs.
" 97 Anderson, Weber & Co.
" 16 Heilburt, Symonds & Co.
Zanzibar, 80 Hale & Son
" 10 S. Figgis & Co.
Madagascar, 5 Prop. Bull Wf.
Singapore, 100 Huttenbach & Co.
France, 51 H. Johnson & Sons
Sydney, 7 W. C. Bacon & Co.
Italy, 3 J. G. Ingram & Son
Germany, 8 Lewis & Peat
" 70 L. & I. D. Jt. Co.
Singapore, 110 Vokins & Co.

Carbonic Acid—
Germany, 25 pks. J. G. Black

Castor Oil—
Italy, 20 cs. A. Laming & Co.
France, 2 W. G. Frith & Co.
" 35 F. Boehm
" 30 brls. R. W. Greeff & Co.
Belgium, 10 10 cks. Sawer Sons & Co.
Italy. 10 cs. Fellows, Morton & Co.
Belgium, 59 brls. R. G. Hall & Co.

Caustic Potash—
France, 20 drs. J. Barber & Co.
" 48 W. E. Cole

Chemicals *(otherwise undes.)*—
Belgium, 470 T. H. Lee
Germany, 168 "
France, 11 Burnett Brs. & Sons
Germany, 7 Petri Brs.
" 10 Phillipps & Graves
" 36 Domeier & Co.
" 53 Ross & Deering
U. States, 1,050 E. C. Hales
France, 38 Flageollet & Co.
Belgium, 40 Société John Cockerill
Germany, 1,597 A. & M. Zimmermann
Holland, 60 J. Barber & Co.

Cream of Tartar—
France, 9 cks. B. & F. Wf. Co.
" 9 G. S. N. Co.
" 4 C. Atkins & Nisbet
Holland, 20 kgs. B. & F. Wf. Co.
France, 5 M., Ashby, Ltd.
Holland, 10 Domeier & Co.
Portugal, 5 B. & F. Wf. Co.
France, 65 Finlay & Co.

Dextrine—
Germany, 10 bgs. H. Lambert
" 100 Vokins & Co.
" 50 H. Lorenz

Dyestuffs—
Alizarine
Bombay, 5 cs. H. Lambert
Divi Divi
Madras, 128 pks. Walker, Munsie & Co.
Extracts
Germany, 1 pk. J. Hall jun., & Co.
" 200 T. H. Lee
Canada, 240 A. J. Humphery
France, 100 S. M. Frankenstein & Co.
" 50 cks. L. J. Levinstein & Sons
Denmark, 2 cs. D. Currie & Co.
Fustic
Hayti, 11 t. Churchill & Sim
Gambier
Singapore, 921 pks. W. Balchin
" 620 Beresford & Co.
" 8 L. & I. D. Jt. Co.
" 1,797 bls. N. S. S. Co.
" 905 Brinkmann & Co.
" 248 Union Ltge. Co.
Indigo
Calcutta, 4 chts. L. & I. D. Jt. Co.
Madras, 21 "
" 18 Arbuthnot, Latham & Co.
" 2 Parry & Co.
" 4 P. Macfadyen & Co.
" 9 F. Claydon & Co.
" 69 Eales, Prince & Co.
Calcutta, 6 Ernsthausen, Ltd.
E. Indies, 45 L. & I. D. Jt. Co.
Logwood
Hayti, 20 t. Churchill & Sim
Myrabolams
Madras, 683 pks. W. Sheloott
Calcutta, 3,000 Montgomerie & Co.
E. Indies, 841 bgs. S. Barrow & Brs.
Shumac
Italy, 60 bgs Tatham, Bromage & Co.
" 100 J. Kitchin, Ltd.
" 500 pks. Harris Brs.
Tanners' Bark
Belgium, 25 t. Leach & Co.
Townsville, 42 R. Books & Co.
Valonia
A. Turkey, 144 t. A. & W. Nesbitt
" 100 Hore & Scrivener

Dycstuffs *(otherwise undescribed)*
France, 1 cs. Hernu, Peron & Co.

Farina—
France, 10 cs. Hernu, Peron & Co.
Holland, 100 bgs. J. Knill & Co.
Germany, 100 E. & T. Pink
" 100 J. Barber & Co.
Holland, 50 H. Lorenz
" 50 Dunlop Brs. & Co.

Gamboge—
Singapore, 8 cs. L. & I. D. Jt. Co.

Glucose—
France, 200 pks. 200 c. L. Norman & Co.
U. States, 275 1,320 "
" 510 610 Ohlenschlager Brs.
" 50 285 J. Keiller & Son
" 150 900 Page, Son & East
" 500 500 G. Clark & Sons
Holland, 120 120 J. Barber & Co.
France, 200 200 Barrett, Tagant & Co.
U. States, 250 250 Trier, Meyer & Co.
" 1,000 1,000 W. Balchin
" 500 500 Fellows, Morton & Co.
" 250 250 W. Gruse & Co.
" 99 550 E. & T. Pink
" 150 825 T. M. Duche & Sons
" 150 855 Deering & Robottom
France, 400 400 W. E. Cole
U. States, 850 2,580 R. G. Hall & Co.

Glue—
France, £90 T. M. Duche & Sons
" 61 J. Harrison
Germany, 67 T. H. Lee
France, 100 E. Fischel
Germany, 85 L. & I. D. Jt. Co.
" 40 Bailey & Leetham
Belgium, 76 T. Ronaldson & Co.
France, 43 B. & F. Wf. Co.
U. States, 28 Armour & Co.
Holland, 10 G. Rahn & Co.
" 6 H. Johnson & Sons
France, 49 Vokins & Co.

Litharge—
Germany, 4 cks H. Lambert
" 18 H. Wallace & Co.
Holland, 14 J. Owen

Magnesia—
Holland, 5 c. A. & M. Zimmermann

Manganese—
Holland, 6 c. J. Barber & Co.

Mica—
E. Indies, £25 Arbuthnot, Latham, & Co.
" 120 L. & I. D. Jt. Co.
" 4,615 W. M. Smith & Sons

Naphtha—
Germany, 12 dms. Tingle, Jacobs & Co.
" 7 Sutton, Carden & Co.
Belgium, 17 Lister & Biggs

Ochre—
Holland, 9 pks. Phillipps & Graves
France, 40 cks. 70 brls. W. Harrison Co.
Belgium, 91 D. C. Thomas & Sons

Phosphate Rock—
Belgium, 3 t. T. H. Lee
France, 160 A. Hunter & Co.

Pitch—
Germany, 10 cs. H. Lambert
N. Russia, 600 Fellows, Morton, & Co.
Melbourne, 9 pks. A. Morgan & Co

Plumbago—
Italy. 20 bgs. A. Laming & Co.
Ceylon, 375 cks. Vokins & Co., Ltd.
Germany, 38 B. Gallaway
Japan, 32 Union L. Co., Ltd
Ceylon, 64 R. G. Hall & Co.
" 30 Doulton & Co.
" 1,178 J. Thredder, Son, & Co.

Potash—
Canada, 89 c. Charles & Fox
France, 40 drs. J. Knight & Sons

Potassium Bicarbonate—
Holland, 30 c. A. & M. Zimmermann

Potassium Carbonate—
France, 100 c. Petri Brs.
" 62 Macintosh & Co.
Germany, 100 R. W. Greeff & Co

Potassium Chloride—
Germany, 508 bgs. Bessler, Waechter, & Co.

Rosin—
France, 51 brls. Moore & Hole

Salicylic Acid—
Holland, 5 pks. J. Barber & Co.
Germany, 14 T. H. Lee

Saltpetre—
Germany, 41 cks. J. Hall, jun., & Co.
E. Indies, 298 bgs. Arracan Co., Ltd.
Germany, 70 S. E. Railway Co.
E. Indies, 590 Blackwood, Bryson & Co.
Germany, 2 L. & I. D. Jt. Co.
E. Indies, 3,617 Lucas & Spencer's Wf., Ltd.

Silica—
Germany, £250 Hancke & Co

Sodium Sulphate—
Holland, 29 pks. H. Lewis

Starch—
Germany, 225 cs. Phillipps & Graves
Holland, 80 "
Belgium, 100 T. H. Lee
U. States, 20 brls. Beck & Pollitzer
" 100 bgs. L. & I. D. Jt. Co.
France, 400 E. & T. Pink
U. States, 300 L. Sutro & Co.
Belgium, 75 A. B. Curtis & Co.
" 440 F. Claydon & Co.
" 120 Leach & Co.
Germany, 330 Horne & Co.
Austria, 5 S. Potter
Holland, 1,020 Little & Johnson
Belgium, 610 E. & T. Pink

Stearine—
U. States, 20 cks. Beresford & Co.
Holland, 51 bgs. Moodaaus Brs.
Belgium, 15 H. Hill & Sons
Holland, 14 J. Owen
France, 80 Walhouse & Tassell

Sulphur—
Italy, 200 t. A. Hunter & Co.
" 30 Parbury, Henry, & Co.
" 11 G. Harker & Co.

Talc—
France, £40 G. G. Blackwell, Sons & Co.
" 100 Stobbs, Wilson, & Co.

Tar—
N. Russia, 300 brls. Union Whvs. Co.
" 558 W. F. Malcolm & Co.

Tartaric Acid—
France, 40 pks. L. & I. D. Jt. Co.
Holland, 35 B. & F. Wf. Co.
" 4 City Const. Wf.
" 32 F. C. Devon & Co.
" 4 Kirkpatrick & Co.

Ultramarine—
Germany, 25 pks. Taylor Brs.
Holland, 10 G. Rahn & Co.
Germany, 10 cs. Steinhoff, Sons, & Co.
Belgium, 10 cks. J. Harrison

Varnish—
U. States, 15 pks. Allan Brs. & Co.
" 6 Dawson Brs.

Waste Salt—
Germany, 21 t. A. J. Luke & Co.

White Lead—
Belgium, 23 cks. Burrell & Co.
Germany, 20 Randall Brs.
Belgium, 36 Perkins & Hoare
" 36 brls. Leach & Co.
Holland, 20 W. A. Rose & Co.
" 48 W. Balchin

Wood Pulp—
Sweden, 500 pks. W. G. Taylor & Co.
Germany, 200 Christophersen & Co.
" 100 L. Knoblauch
Sweden, 251 Moreton Cox Brs. & Co.
Norway, 480 Tough & Henderson
" 500 Johnson & Co.
" 300 W. E. Bott & Co.
Holland, 248 Phillipps & Graves
Sweden, 124 M. D. Co.
Belgium, 2,789 E. J. & W. Goldsmith
" 638 Moreton Cox Brs.

Zinc Ashes—
Sydney, 75 t. J. Gess

Zinc Oxide—
U States, 200 brls. M. Ashby, Ltd.
Holland, 26 "
France, 40 "
Germany, 25 cks. R. W. Greeff & Co.

Zinc Sulphate—
Germany, 32 cks. Beck & Pollitzer

Zinc White—
Holland, 500 cks. Soundy & Sons

LIVERPOOL.

Week ending August 13th.

Acetate of Lime—
New York, 1,585 bgs.
Acetic Acid—
Rotterdam, 20 balloons
Alum Cake—
Rotterdam, 82 cks.
Barytes—
Antwerp, 50 cks. 50 bgs.
Rotterdam, 52
Bone Ash—
Campana, 719 bgs.
Boracite—
Panderma, 125 t. Roberts & Evans
Borax—
Valparaiso, 600 sks. A. S Henry & Co
" 2,419
Caoutchouc—
Havre, 23 cks. & a qty. Cunard S. S. Co., Ld.
Valparaiso, 23 pks. F. Suarez & Co.
Chemicals *(otherwise undescribed)*
Hamburg, 1 cs.
Cod Oil—
Hamburg, 2 brls.
Colours—
Hamburg, 20 cks.
Rotterdam, 8
Cottonseed Oil—
New York, 50 brls.
Dried Blood—
Campana, 314 pks.
Dyestuffs—
Cochineal
Teneriffe, 20 bgs. Brown Brs. & Co.
" 9 Canary Isld. Trdg. Co.
Cutch
Rangoon, 700 bxs.
Divi Divi
Hamburg, 3 bgs.
Extracts
New York, 6 pks. W Bingham
" 250 cs. T. Atkin & Co
Hamburg, 40 bgs.
Saffron
Denia, 1 cs.
Shumac
Palermo, 25 bls. 1,410 bgs.
Valonia
Smyrna, 160 bgs. Barry Brs.
Farina—
Fiume, 160 bgs.
Hamburg, 1,130 H. Tyrer & Co
Glucose—
New York, 800 brls. 8 pks.
Boston, 200
Glue—
Boston, 4 pks. 4 brls. Musson & Co.
" 30 cs. T. Robinson & Co.
" 20 crts. 2 Richards & Ward
Antwerp, 2 cks. 5 bls.
Hamburg, 110 bgs.
Rotterdam, 13 200
Iron Oxide—
Trieste, 6 cks.
Lime—
Syra, 1 cs.
Limestone—
Antwerp, 4 cs. J. T. Fletcher & Co
Manganese Ore—
Poti, 2,030 t.
Mineral White—
Fiume, 100 bgs.
Molasses—
Teneriffe, 4 pns.
Paint—
Boston, 4 brls. Musson & Co.
Pitch—
Archangel, 150 cs.
Pitch Oil—
Rotterdam, 10 cks.
Potashes—
Montreal, 40 brls.
Pyrites—
Huelva, 5,471 t. Matheson & Co.
Rosin—
Boston, 1,600 brls.
Havre, a qty. Cunard S. S. Co., Ld.
Bahia, 144 bgs.
Saltpetre—
Hamburg, 10 bgs. 5 cks.
Soap—
Naples, 240 cs.
Boston, 5 Evans, Sons & Co.
" 6 T. Thompson
Soapstone—
Bordeaux, 600 bgs. G. G. Blackwell, Sons & Co
Starch—
Hamburg, 80 cs.
Boston, 1,600 bgs. 100 bxs. 110 brls.
New York, 100
Boston, 20 J. Armstrong & Co.
Antwerp, 207
Rotterdam, 160 40 bxs.
New York, 10 brls. L. & N. W. Railway Co.
Stearine—
Baltimore, 25 tcs.
Antwerp, 113 bgs.
Tallow—
New York, 75 tcs. 1 pk.
Boston, 53 brls. Garner, Bennett & Co.
" 300
Campana, 94 cks.
Tar—
Archangel, 2,056 brls.
Tartar—
Hamburg, 1 cs.
Naples, 2 cks.
Bordeaux, 8
Tartaric Acid—
Rotterdam, 7 cks.
Treacle—
Bordeaux, 35 cs.
Ultramarine—
Hamburg, 8 cks. 7 cs.
Varnish—
New York, 11 brls.
Waste Salt—
Hamburg, 238 cks. H. Tyrer & Co.
" 2,090 bgs.
White Lead—
Antwerp, 23 cks.
Rotterdam, 20
Wood Pulp—
Boston, 700 bdls. Spicer Brs. & Co.
" 332
Rotterdam, 123 bls.
Zinc Oxide—
Antwerp, 43 brls.
Rotterdam, 25 cks.

MANCHESTER.

Week ending August 15th.

Acetic Acid—
Rotterdam, 16 balloons
Albumen—
Libau, 5 cs. Stott, Coker, & Co
Alkali—
Rotterdam, 2 cks.
Alumina—
Rotterdam, 14 cks.
Alumina Sulphate—
Rotterdam, 12 cks.
Aluminous Cake—
Rotterdam, 95 cks.
Barytes—
Rotterdam. 24 cks.
Carbolic Acid—
Rotterdam, 25 cks.
Castor Oil—
Antwerp, 79 brls. J. T. Fletcher & Co.
Caustic Potash—
Antwerp, 20 dms.
Chemicals *(otherwise undescribed)*
Rouen, 30 cks.
Chrome Alum—
Hamburg, 6 cks.
Colours—
Boulogne, 2 cs.
Antwerp, 3 cks.
Rotterdam, 17 66 46 brls. 12 bxs. 26 pks.
Creosote Salts—
Hamburg, 2 cks.
Dextrine—
Stettin, 50 bgs. Stott, Coker, & Co.
Dyestuffs—
Alizarine
Rotterdam, 21 cks. 1 cs.
Extracts
Antwerp, 8 brls.
Logwood
Progresso, 525 t.
Belize, 560 M'chester Ship Canal Co.
Farina—
Stettin, 1,000 bgs. Stott, Coker, & Co.
Rotterdam, 100
Hamburg, 400
Stettin, 2,300 Browne, Geveke, & Co.
" 550
Gelatine—
Rouen, 20 cs
Glue—
Rouen, 12 cks. 18 bls.
Rotterdam, 80 bgs. 20 cs.
Stettin, 10 20
Limestone—
Antwerp, 1 crt.
Litharge—
Rotterdam, 15 cks.
Potassium Chloride—
Hamburg, 23 cks.
Soap—
Bordeaux, 4 cs.
Sodium Nitrate—
Rotterdam, 8 cks.
Starch—
Rotterdam, 300 cs.
Hamburg, 20 cks.
Antwerp, 10 J. T. Fletcher & Co.
" 75
Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co.
Tar Dyes—
Hamburg, 13 cks.
Tartar—
Bordeaux, 3 cks.
Hamburg, 37
Tartaric Acid—
Rotterdam, 35 cks.
Waste Salt—
Hamburg, 104 bgs.
White Lead—
Rotterdam, 11 cks.
Wood Pulp—
Kotka, 164 bls.
Drammen, 40
Gefle, 5,840 Henderson, Craig, & Co.
Gothenburg, 2,082
Zinc Ashes—
Stettin, 15 cks.
Zinc Oxide—
Rotterdam, 25 brls.

HULL.

Week ending August 15th.

Barytes—
Rotterdam, 43 cks. Hutchinson & Son
Amsterdam, 24 Hutchinson & Son
Rotterdam, 33 W. & C. L. Ringrose
Antwerp, 143 H. F. Pudsey
Bremen, 41
Bone Meal—
Bombay, 500 bgs.
Kurrachee, 7,750
Castor Oil—
Antwerp, 4 cks. Bailey & Leetham
Chemicals *(otherwise undescribed)*
Bremen, 4 kgs. Veltmann & Co.
Dunkirk, 245 Wilson, Sons, & Co., Ld.
Antwerp, 18 pks. "
Chromium Fluoride—
Rotterdam, 5 cs. Hutchinson & Son
Cod Oil—
Aalesund, 80 brls. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 3 cks. Bailey & Leetham
" 20 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 38 W. & C. L.
19 cks. 11 cs. 7 brls. Ringrose
Cream of Tartar—
Rotterdam, 2 cks. Hutchinson & Son
Dextrine—
Stettin, 100 bgs.
Dyestuffs—
Alizarine
Rotterdam, 18 brls. W. & C. L. Ringrose
Fustic
Trieste, 5 tns. Wilson, Sons, & Co., Ld.
Myrabolams
Bombay, 9,806 bgs. "
Shumac
Trieste, 43 bgs. Wilson, Sons, & Co., Ld.
Palermo, 275
" 1,200
Valonia
Smyrna, 574 t.
Farina—
Harlingen, 100 bgs. W. & C. L. Ringrose
Stettin, 340 Wilson, Sons, & Co., Ld.
" 200
Hamburg, 100
Rotterdam, 500 Wilson, Sons, & Co., Ld.
Glucose—
New York, 50 brls. Wilson, Sons, & Co., Ld.
Glue—
Rouen, 20 cs. 10 crts. Rawson & Robinson
Antwerp, 5 Wilson, Sons, & Co., Ld.
Dunkirk, 51 cks Wilson, Sons, & Co., Ld.
Kaolin—
Rotterdam, 123 bgs. Hutchinson & Son
Lead Acetate—
Hamburg, 1 ck. Bailey & Leetham
Manure—
Stavanger, 26 bgs. Wilson, Sons, & Co. Ld.
Ochre—
Rouen, 84 cks. Rawson & Robinson
Paint—
Boston, 60 cs. Wilson, Sons, & Co., Ld.
Phosphate—
Ghent, 816 bgs.
Dunkirk, 2,500
Phosphate Rock—
Pt. Royal, 1,930 t. Hammond, Emes, & Co.
Pitch—
Amsterdam, 25 cks. Hutchinson & Son
Antwerp, 9 Wilson, Sons, & Co., Ld.
Potash—
Dunkirk, 18 cks. Wilson, Sons, & Co., Ld.
Pumice Stone—
Messina, 67 pks. Wilson, Sons, & Co, Ld.
" 20 bgs.
Starch—
Antwerp, 114 cs. Bailey & Leetham
Ghent, 262 Wilson, Sons, & Co., Ld.
Bremen, 6,169 Veltmann & Co.
Antwerp, 80 Wilson, Sons, & Co, Ld.
Stearine—
Antwerp, 13 bgs. Bailey & Leetham
" 30 Wilson, Sons, & Co., Ld.
Sulphur—
Catania, 576 pks. Wilson, Sons, & Co., Ld.
Tallow—
Boston, 6 brls. 30 tcs. Wilson, Sons, & Co., Ld.
Tar—
Stockholm, 10 brls. Wilson, Sons. & Co., Ld.
Wasa, 1,150 J. Good & Sons
Gamla Karleby, 1,000 brls. "

Treacle—
New York, 150 brls. Wilson, Sons, & Co., Ld.
Boston, 100 ,,
White Lead—
Amsterdam, 25 cks. Hutchinson & Son
Rotterdam, 48 cks. W. & C. L. Ringrose
Antwerp, 26 Bailey & Leetham
Rotterdam, 67 Hutchinson & Son
Wood Pulp –
Helsingfors, 260 bls. J. Good & Sons
Zinc Oxide—
Antwerp, 50 cks Bailey & Leetham

GLASGOW.

Week ending August 20th.

Acetate of Lime—
Philadelphia, 1,375 bgs.
Alumina Sulphate—
Rotterdam, 30 cks. J. Rankine & Son
Barium Sulphate—
Antwerp, 50 bgs.
Barytes—
Rotterdam, 43 pks.
Castor Oil—
Antwerp, 60 cks.
Chemicals *(otherwise undes.)*—
Genoa, 7 cs. Wm. Renwick & Co.
Colours—
Antwerp, 2 cks.
Rotterdam, 41 brls. J. Rankine & Co.
Dyestuffs—
Alizarine
Rotterdam, 45 pks.
,, 6 brls. J. Rankine & Co.
Argols
Bordeaux, 10 cks.
Glucose—
New York, 1,000 brls.
Lead Acetate—
Hamburg, 20 cks.
Paraffin Scale—
New York, 215 brls.
Paraffin Wax—
New York, 50 brls.

Plumbago—
Genoa, 5 bgs.
Potash—
Rotterdam, 20 cks. J. Rankine & Co.
Rosin –
New York, 801 brls.
Salt—
Hamburg 100 bgs.
Saltpetre—
Hamburg, 40 cks.
Soapstone—
Genoa, 100 bgs.
Soda Ash—
Rotterdam, 3 cks. J. Rankine & Son
Starch—
New York, 500 bgs.
Antwerp, 100 cs.
Ghent, 80
Stearine—
Rotterdam, 14 cks. J. Rankine & Son
Tallow—
Boston, 60 brls.
Tartar –
Bordeaux, 2 cks.
Tartaric Acid—
Rotterdam, 4 cks. J. Rankine & Son
Treacle—
Philadelphia, 1,000 brls. Waddell & Bryson
Varnish—
New York, 14 brls.
Genoa, 1 cs. Craig & Rose
Waste Salt—
Hamburg, 1,963 bgs. 172 tns.
White Lead –
Rotterdam, 80 cks. J. Rankine & Co.
Wood Pulp—
Christiana, 601 bls.
Zinc White—
Rotterdam, 20 cks. J. Rankine & Son

TYNE.

Week ending August 15th.

Acids—
Hamburg, 1 cs. Tyne S. S. Co

Alum Earth—
Hamburg, 133 cks. Tyne S. S. Co
Asbestos—
Rotterdam, 1 cs. 7 bls. Tyne S. S. Co.
Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co
Glucose –
New York, 250 brls.
Glue—
Antwerp, 1 ck. Tyne S. S. Co
Limestone—
Antwerp, 4 cs. Tyne S. S. Co.
Phosphate Rock—
Savannah 2,156 t. Langdale's Manure Co.
Quicksilver—
Copenhagen, 100 cyldrs.
Rosin—
Savannah, 1,300 brls. Langdale's Chem. Manure Co
Soap—
Rotterdam, 2 cs. Tyne S. S. Co.
Starch—
Rotterdam, 8 cs. Tyne S. S. Co.
Stearine—
Antwerp, 31 bgs. Tyne S. S. Co.
Tallow—
New York, 10 brls.
Wood Pulp—
Christiania, 185 bls.
Zinc Oxide—
Rotterdam, 25 cks. Tyne S. S. Co.
Antwerp, 25 brls. ,,

GOOLE.

Week ending August 12th.

Alizarine—
Rotterdam, 76 cks.
Aniline—
Hamburg, 21 cks. 2 cs.
Rotterdam, 254 73
Calais, 3
Colours—
Hamburg, 2 cks. 4 cs.
Dyestuffs *(otherwise unaescribed)*
Rotterdam, 120cks. 15 cs.
Boulogne, 21 1 50 pks.
Farina –
Hamburg, 50 bgs.

Glucose—
Hamburg, 86 cks.
Calais, 100 bgs.
Glue—
Rotterdam, 20 bgs.
Logwood—
Monte Christi, 707 t.
Paint—
Hamburg, 12 cks.
Dunkirk, 3
Phosphate—
Ghent, 1,500 bgs.
Pitch—
Rotterdam, 18 cks.
Potash—
Calais, 25 dms.
Saltpetre—
Rotterdam, 100 bgs.
Soda—
Rotterdam, 4 cks.
Starch—
Rotterdam. 10 cs.
Tartaric Acid—
Rotterdam. 2 cks.
Ultramarine—
Rotterdam, 2 cs.
Waste Salt—
Hamburg, 423 t. 540 cks. 20 bgs

GRIMSBY.

Week ending August 25th.

Albumen—
Antwerp, 3 cs.
Caoutchouc—
Hamburg, 4 cks.
Antwerp, 2 cs.
Chemicals *(otherwise undescrib*
Hamburg, 5 cs.
Colours—
Hamburg, 29 cks. 15 cs. 53 pks.
Antwerp, 18 84
Extracts—
Dieppe, 8 cks.
Farina—
Hamburg, 20 bgs.
Plumbago—
Hamburg, 1 ck.
Starch—
Antwerp, 230 cs.
Hamburg, 40
Wood Pulp—
Hamburg, 40 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 19th.

Acids—
Natal, 3 t. 2 c. £37
Alkali—
Siberia, 10 t. 18 c. £406
Alum—
Table Bay, 8 t. 11 c. £23
Ammonia—
Bunbury, 5 c. £16
Hiogo, 20 drs. 45
Ammonium Carbonate –
New York, 4 t. 13 c. £122
Rouen, 41 pks. 131
Rangoon, 10 cs. 24
Yokohama, 2 52
Hiogo, 3 72
Ammonium Chloride—
B. Ayres, 1 t. £35
Samsoun, 10 c. 17
Ammonium Sulphate—
Bremen, 150 t. £1,170
Hamburg, 220 1,885
Jersey, 60 7 c. 490
Anhydrous Ammonia—
Cologne, 24 cyldrs. £220
Cape Town, 2 33
Arsenic—
Adelaide, 5 t. 3 c. £118
Barium Nitrate—
Chicago, 4 t. 1 c. £71

Bisulphite of Lime—
Sydney, 10 t. £38
Bleaching Powder—
E. London, 1 t. 1 c. £15
Carbolic Acid—
E. London, 220 drs. £24
Rotterdam, 47 cks. 210
Carbon Bisulphide—
N. Orleans, 6 drs. £32
Carbonic Acid Gas—
Jersey, 33 tubes £20
Cape Town, 34 160
Caustic Soda—
Melbourne, 1 t. 12 c. £48
Adelaide, 6 6
E. London, 1 4 30
Algoa Bay, 5 18 90
Delagoa Bay, 4 5
Natal, 1 17 19
Chemicals *(otherwise undescribed)*
Demerara, 100 crbys. 11 cs. £100
Rotterdam, 6 t. 2 c. 210
Shanghai, 2 18
Christiania, 1 50
Sydney, 18 pkgs. 32
D lagoa Bay, 1 10 33
Hamburg, 5 10 800
Jersey, 95 440
Citric Acid—
St. Petersburg, 12 c. £91
Brussels, 34 kgs. 3 cks. 968
Adelaide, 3 19
Natal, 2 15
Fremantle, 1 25
Rotterdam, 15 91

Hamburg, 1 ck. 20 brls. 202
Libau, 4 45
Melbourne, 2 t. 10 307
Stettin, 1 38
Lisbon, 5 34
Perth, 2 kgs. 29
Coal Products—
Aniline Dye
Melbourne, 1 cs. £18
Aniline Oil
Ghent, 1 dm. £50
Benzol
Rotterdam, 73 cks. £265
Creosote
Dieppe, 23,500 gallns. £123
Naphtha
Treport, 24 cks. £73
Brussels, 25 78
Naphthaline
Hamburg, 1,437 bgs. £450
Treport, 50 113 pks. 32 cks. 279
Paraffin Wax
Pernambuco, 75 cs. £130
Pitch
Hong Kong, 1,750 t. £7,800
Alexandria, 200 brls. 75
New York, 1,050 587
Boston, 1,000 126 cks. 717
Tar
Cologne, 250 cks. £129
Tegal, 40 brls. 22
Sourabaya, 25 14
Batavia, 60 32
Tar Oil
Gothenburg, 250 cks £210
Boston, 250 130
Bremen, 3 15

Copper Sulphate –
Shanghai, 10 c.
Copperas—
Constantinople, 10 t.
Cream of Tartar—
Auckland, 10 c.
Sydney, 1 t.
Cape Town, 6 kgs.
Adelaide, 4
Launceston, 1
Disinfectants—
Cape Town, 3 cs.
E. London, 32 bgs.
Melbourne, 17
New York, 2 t.
Natal, 2 cs.
Disinfectants and Ammo (Liquid)—
Bahia, 3 cs.
Guano—
Guadeloupe, 100 t.
Demerara, 30
Manure—
Gothenburg, 78 t. 16 c.
Chinde, 5
Treport 130
Lyttelton, 25 12
Potassium Chloride –
Colombo, 10 t.
Potassium Cyanide—
New York, 50 cs.
Singapore, 3 t. 6 c.
Melbourne, 10 cks.
Algoa Bay, 15

ium Prussiate—
1 cs. £18

lic Acid—
to, 2 cs. £25

ake—
rp, 135 t. £236

tre—
o, 2 t. 4 c. £45
ide, 1 22
e Janeiro, 4 18 110
ay, 13 11
ampton, 1 1 23
rdam, 1 10 31

of Soda and Lime—
York, 2 cs. 10 cks. £126

Dip—
church, 75 cs. £112
ngton, 200 8 cks. 322
ru, 18 90
rne, 30 75
r, 200 500
ndon, 4 t. 9 c. 2,200 drs. 738
rt, 50 cs 125
eston, 50 125
land 200 500
res, 14 350
y, 1,000 2,500

ideo, 4 c. £6
ltar, 10 6
Bay. 16 20
lton (Ont.), 9 15

Ash—
e Janeiro, 34 t. 18 c. £168

Crystals—
antle, 5 t. £14
ide, 10. 1 c. 24

m Bicarbonate—
antle, 1 t. £7
Bay, 12 c. 5

m Bisulphite—
nto, 5 hhds. £12

m Sulphate—
t, 50 t. £75

tium Nitrate—
go 11 t. 9 c. £269

ur—
enas, 69 brls. £126
Town, 30 t. 146
ide, 20 18 c. 115
ourne, 33 13 238

uric Acid—
ng. 4 t. 19 c. £22
apore, 2 10 24
a Bay, 15 cs. 16
d, 40 44
ondon, 25 18
, 4 27

ric Acid—
rio, 2 t. £235
a, 2 c. 15
ey, 1 10 189
ourne, 8 16 941
hama, 2 226
aide, 2 10 315
erdam, 8 cks. 205

e Salt—
elona, 24 t. 2 c. £193

IVERPOOL.

Week ending August 19th.

men—
elona, 17 c. £30

li—
on, 16 t. 15 c. £105

a—
utta. 21 t. 10 c. £109
e Town, 1 6 3 q. 7
Video, 1 1 3 5
ablanca, 1 6 6
de Janeiro, 16 3 6
ney, 2 1 12
atz, 10 1 48
xandria, 50 cks. 29
cahuano, 20 19

ninous Cake—
de Janeiro, 7 t. 16 c. £28
utta, 13 19 2 q. 44

monium Carbonate—
paraiso, 2 t. £63
enhagen, 1 2 c. 25
rto, 5 11
lifax, 5 7
noa, 1 2 27

monium Chloride—
ona, 11 c. £17
essa, 15 26
paraiso, 8 16

Syra, 3 5
Philadelphia, 7 t. 6 2 q. 239
Barcelona, 2 2 48
Stettin, 5 2 104
Hamburg, 12 14
Montreal, 5 9
Smyrna, 1 1 3 40
Alexandria, 1 10 10 brls. 89
St. Petersburg, 10 5 3 q. 350

Ammonium Sulphate—
Teneriffe, 10 t. 10 c. £85
Gd. Canary, 4 33
Honolulu, 50 2 3 q. 376
Barcelona, 70 10 600
Genca, 10 2 1 8
Bilbao, 9 16 2 85
Las Palmas, 7 59

Bleaching Powder—
Alexandria, 3 cks.
Acona, 12
Antwerp, 91
Baltimore, 92
Bombay, 15 8 bxs.
Bordeaux, 19
Boston, 904
Corfu, 15
Ghent, 20
Lisbon, 46
Montreal, 51
Naples, 13
New York, 152 25 44 dms.
Genoa, 155
Halifax, 10 cs.
Leghorn, 38
Pasages, 20
Patras, 7 brls.
Piraeus, 6
Riga, 50 pks.
San Sebastian, 29
Seville, 44
Tampico, 5 brls.
Vera Cruz, 20

Boracic Acid—
Melbourne, 6 t. 10 c. £211
Stettin, 2 8 3 q. 65
Antwerp, 1 3 2 28
Hiogo, 5 19 156
Montreal, 16 26

Borax—
Sydney, 3 t. £63
Hamburg, 1 20
Barcelona, 4 11 c. 3 q. 92
Bremen, 5 16 3 112
Genoa, 1 9 2 30
Rotterdam, 1 6 26
Montreal, 21 17 3 440
New York, 1 1 3 19
Galatz, 11 11
Antwerp, 17 1 3 325
Hiogo, 6 17 2 126

Calcium Chloride—
Melbourne, 9 t. 19 c. £23
Odessa, 14 18 33
Rangoon, 3 2 8

Carbolic Acid—
Hamburg, 14 t. 13 c. £754
Rotterdam, 16 950
Colon, 1 11 41
Kingstown (Jam.), 11 22
Boston, 6 14 1 q. 220
Hong Kong, 1 11 1 20

Carbon Bisulphide—
Para, 4 c. £9

Carbonic Acid Gas—
Rangoon, 2 t 17 c. £185

Caustic Soda—
Adelaide, 80 dms.
Alexandria, 40
Aracaju, 20
Baltimore, 300
Barcelona, 242 18 cks.
Batavia, 20
Bari, 17
Bilbao, 65
Boston, 100
B. Ayres, 175
Ceara. 40
Copenhagen, 9 bxs.
Corfu, 35
Dunedin, 66
Dunkirk, 35 cks.
E. London, 15
Fairwater, 50
Galatz, 8
Genoa, 6 brls. 420
Hamburg, 10
Havana. 100
Ibrail, 50
Kingston, 15
La Guayra, 52
Las Palmas, 7
Leghorn, 69
Lisbon, 196
Maranham, 65
Maranhao, 10
Messina, 20
M. Video, 10 kgs.
Montreal, 116
Newfairwater, 12
N. Orleans, 100
New York, 310 25
Odessa, 100
Oporto, 72
Palermo, 30
Parangua, 20
Paris, 80
Paysandu, 50
Pelotas, 10
Pernambuco. 100
Philadelphia, 50
Porto Alegre, 20
Quebec 50
Rangoon, 34
Riga, 35
Rio de Janeiro, 20
Rio Grande do Sul, 50
Rockhampton, 52
Rosario, 40
Rotterdam, 112
San Francisco, 481
San Sebastian, 74
Santander, 15
Singapore, 10
Seville, 36 pks. 725 100
Sourabaya, 8
Sydney, 60
Syra, 20
Talchuano, 23
Tripoli, 3 brls.
Valparaiso, 50 kgs.
Vigo, 15

Chemicals *(otherwise undescribed)*
Danzig, 5 c. £14
Copenhagen, 1 t. 19 55
Mersyne, 16 28
Smyrna, 1 35
Rotterdam, 1 4 44
Pernambuco, 1 2 q. 7
Calcutta, 59 1 157
Philadelphia, 13 16 452
Salonica, 16 28
Alexandria, 1 6 45
Genoa, 10 17
B. Ayres, 3 105
Stettin, 1 8 40
Boston, 12 13 736
New York, 6 18 853
Bremen, 10 14
M. Video, 1 37
Odessa, 4 9 2 138

China Clay—
Barcelona, 30 cks.
Bombay, 48
Boston, 1,651 473 bgs.
Calcutta, 220
Melbourne. 10
Philadelphia. 340

Chromium Trioxide—
Antwerp, 9 c. £32

Citric Acid—
M. Video. 5 c. £33
New York, 5 31

Coal Products—
Aniline Colours
Santos. 11 kgs.
Aniline Oil
Oporto, 6 cks.
Aniline Salts
Bombay, 2 pks.
Boston, 16 cks.
Genoa, 10
Lisbon, 1
Shanghai, 50 cs.
Naphthaline
Riga. 150 bgs.
Pitch
Akassa, 6 brls.
Carril, 100
Galatz, 30
Pernambuco, 3
Tar
Akassa, 12 brls.
Galatz, 170
New York, 8
St. John's. N'fld., 8 t.

Copper Sulphate—
Konigsberg, 14 c. 1 q. £11
Rouen, 4 t. 18 79
Oporto. 8 1 140
Constantinople, 1 3 18
Rio de Janeiro, 4 2 5
Beyrout, 15 1 33
Lisbon. 2 17 2 43
Brindisi, 10 1 155
Ghent, 18 15
Santander, 5 89
Melbourne, 5 88
Brisbane, 2 36
Dunedin, 1 5 22
Wellington, N.Z., 10 9
Gothenburg, 1 2 3 19
Kingstown (Jam.), 2 12 2 44
Sydney, 10 171
Riga, 6 3 91
Paris, 4 17 1 76
Rouen, 34 11 556
Palermo, 16 17 282
Galatz, 3 51
Antwerp, 2 16 2 46

Copperas—
Rio de Janeiro, 1 t. 16 c. £4
Santos, 2 2 10
Varna, 7 3 16
Beyrout, 6 10 12

Cream of Tartar—
Bordeaux, 9 c. 1 q. £40

Disinfectants—
New York, 2 t. 15 c. £40
Calcutta, 4 cks. 7
Rangoon, 1 7
St. John, 17 3 q 31

Gelatine—
Boston, 75 bxs.
San Francisco, 5 cks.

Iron Oxide—
San Francisco, 1 t. £11

Iron Sulphate—
Alexandria, 1 t. 1 c. £5

Lime—
Sierra Leone, 14 t. 18 c. £30

Magnesia—
Leghorn, 1 c. 8 q. £43
New York, 1½ 50
Havre, 3 t. 11 2 58
Santander, 3 22

Magnesium Sulphate—
Pernambuco, 60 kgs.

Manure—
Madeira. 70 t. £600
Bordeaux, 72 8 c. 2 q 208
Las Palmas, 30 5 282

Muriatic Acid—
Pernambuco, 1 t. 1 c. £13

Oxalic Acid—
Valparaiso, 4 c. £7
San Francisco, 1 t. 14 2 q. 57
St. Nazaire, 4 7

Paint—
Alexandria, 320 kgs.
Assinee, 7 dms.
Bangkok, 20
Barcelona, 12 cks.
Beyrout, 45 brls.
Bilbao, 83
Bombay, 1 cs. 10
B. Ayres, 100
Calcutta, 200 50
Callao, 20
Cartagena, N.G., 1
Cartagena, 27 cs.
Eten, 1 50
Fernando Po., 7
Gibraltar, 39
Hamburg 20 10
Hong Kong, 46
Iquitos, 3
La Libertad, 4 cs. 300
Lisbon, 3 46 brls. 20
Loanda, 110 75
Manaos, 10 brls. 17 cks. 6
Mauritius, 875
Montreal. 20
San Francisco, 180
Vera Cruz, 100

Painters Colours—
Akassa. qty.
Alexandria, 1 bx.
Barcelona, 12 brls.
Bremen, 600 bgs.
B. Ayres, 25 cks. 31 kgs.
Calcutta. 20 cs.
Constantinople, 525
Danzig. 200 bgs.
E. London, 5 brls. 86 5
Galatz, 30 2 100
Hamburg, 7 10 45 165 bgs.
Humacao, 2 2
Lisbon, 4
M. Video, 18 cs. 24 50 dms.
New York, 53 4 85
251 brls. 4
Para, 38 brls 35 5 72
Pelotas, 20
Pernambuco, 64 10 brls.
Philadelphia, 64
Ponce. 4
Progresso, 10

Rangoon, 100 bgs.
Rotterdam, 2 cs. 3, 100
St. John's, N'fd., 6, 55
St. Thomas, 3, 23
St. Catherine, 25 dms.
Santander, 25, 10
Shanghai, 121
Sierra Leone, 218
Talcahuano, 4 cs. 9 brls.
Valparaiso, 20, 100, 15
Yokohama, 24
Vera Cruz, 192
Volo, 2

Paraffin Wax—
Bari, 25 bgs.
Callao, 50
Hong Kong, 30 dms.
Pernambuco, 10 cs.
Rio de Janeiro, 5

Phosphorus—
B. Ayres, 11 c. £110
Trinidad, 3 30
Hiogo, 4 t. 10 950

Potash—
Lagos, 1 t. 10 c. £12

Potassium (Metal)—
Bordeaux, 2 q. £20

Potassium Bichromate—
Oporto, 4 t. £ 70
Calcutta, 9 c. 19
Valparaiso, 4 7
Rio de Janeiro, 14 35
Santos, 6 20

Potassium Carbonate—
Boston, 9 t. 2 c. £ 64

Potassium Chlorate—
Oporto, 14 c. £27
Odessa, 2 t. 84
St. Petersburg, 15 348
Amsterdam, 1 40
M. Video, 10 19
Naples, 1 40
Copenhagen, 1 40
Havana, 5 10
Rotterdam, 1 10 60
Riga, 22 10 869
New York, 5 186
Gutujewsky, 13 488
Hiogo, 32 5 1,207

Potassium Prussiate—
Genoa, 19 c. 3 q. £61

Pyrolignite of Iron—
Santos, 10 c. £6

Rosin—
Malta, 12 brls.

Salt—
Accra, 24 t. 17 c.
Adelaide, 1 1
Antwerp, 186 17
Baltimore, 865
Barbadoes, 50
Belize, 88 sks.
Boston, 663
B. Ayres, 118 1
Buguma, 9 3
Calcutta, 3 506
Cameroons, 50
Cape Lopez, 11
Cape Palmas, 5
Degama, 50
Ghent, 150
Gijon, 5
Gd. Bassa, 5
Halifax, 200
Havana, 10
Honolulu, 25
Iceland, 117
Lagos, 159
Melbourne, 100
M. Video, 2
Montreal, 404
New York, 801
Noqui, 500
Old Calabar, 150
Opobo, 50
Orebak, 77
Para, 67
Rio de Janeiro, 1 21
Rotterdam, 269
Salt Pond, 57 10
San Francisco, 643 15
Sierra Leone, 50
Sydney, 900
Syra, 150
Trinidad, 64 1
Valparaiso, 203 3
Ahunnema, 11
Yokohama, 2 3
Wellington, 10

Salt Cake—
Antwerp, 176 t. 11 c. £223

Saltpetre—
Parnahyba, 2 t. 8 c. 3 q. £31
Maranham, 9 3 12
M. Video, 5 6
Pernambuco, 4 7 1 10
Carthagena, N.G., 6 7
Para, 2 45

Sheep Dip—
B. Ayres, 11 t. 10 c. £163

Soap—
Accra, 15 bxs.
Addah, 20
Akassa, 40 tins.
Alexandria, 37 cs.
Algoa Bay, 525 51
Antwerp, 112
Attoaboc, 50
Barbadoes, 2,745
Belize, 475
Bombay, 866 79
Brass, 100
Calcutta, 49 500 bdls.
Callao, 5 6
Cameroons, 125
Canaria, 465
C. C. Castle, 150
Cape Labou, 25
Cape Town, 186 120
Cartagena, N.G., 2
Chama, 165
Christiania, 140 10
Constantinople, 20
Dry Harbour, 50
E. London, 1,100
Gibraltar, 450
Gd. Labou, 50
Guayaquil, 200
Half Jack, 45
Honolulu, 200 5
Karachi, 500 102
Kingston, 250
Lagos, 132
Loanda, 1
Madras, 20
Malta, 132 11
Melbourne, 500
Montreal, 1,004 4 brls.
Mossel Bay, 50
N. Orleans, 300
New York, 60 54 6 cks.
Old Calabar, 1,974
Opobo, 500
Penang, 50 12 bdls.
Piræus, 200 13
Pt Elizabeth, 50
Pt. Natal, 2,119 32
Rangoon, 20
Rotterdam, 250 547
St Lucia, 110
St. John's, N'fld, 20
St. Nazaire, 750
Salt Pond, 50
San Juan, 200
Shanghai, 2,362
Sierra Leone, 310
Smyrna, 33
Sydney, 20 3,500
Teneriffe, 347
Trinidad, 1,300
Valparaiso, 100 kgs.
Zanzibar 600

Soda Alkali—
Barcelona, 150 brls.
Bilbao, 77
Bombay, 5
Lisbon, 145
Montreal, 35
Smyrna, 40
Talcahuano, 20

Soda Ash—
Antwerp, 200 bgs.
Baltimore, 1,040
Barcelona, 28 cks. 50
Bombay, 5
Boston, 66 1,605 13 tcs.
Brisbane, 171
B. Ayres, 100 150 brls.
Calcutta, 108
Callao, 50
Catania, 25
Cartagena, 50
Christiania, 10
Copenhagen, 100
Dunedin, 8
Genoa, 200
Ghent, 125
Hamburg, 2,000
Havana, 8
Lagos, 24
Madras, 40
Maranham, 65
Maranhao, 30
M. Video, 150
Montreal, 350 18 tcs.
New York, 75 810 115
Oporto, 20 5 pps.
Paranagua, 10 brls.
Pelotas, 15
Philadelphia, 174 1,000 262 tcs.
Porto Alegre, 15 brls.
Rio de Janeiro, 300 280
Rockhampton, 80
St. Petersburg, 288
Salonica, 27
San Francisco, 275
Sourabaya, 10
Syra, 100
Varna, 20
Zante, 50 bls.
Vera Cruz, 14
Yokohama, 359

Soda Crystals—
Bahia, 15 cks.
Barcelona, 8
Boston, 980 brls.
Las Palmas, 3 kgs.
Malta, 50
Montreal, 250
Quebec, 25 75
St. John, N.B., 30
Santos, 10 bgs.
Talcahuano, 50
Valparaiso, 150

Sodium—
Bordeaux, 1 q. £5

Sodium Bicarbonate—
Adelaide, 100 bgs.
Antwerp, 65 kgs. 1 ck.
Barcelona, 40
Bilbao, 70
Bombay, 350 19
Bordeaux, 112
Braila, 20
Brisbane, 245
B. Ayres, 70 31
Cartagena, 50
Christiania, 20
Copenhagen, 160 34 5 brls
Danzig, 8 4
Dunedin, 110
Genoa, 60 79 tcs.
Ghent, 15
Hamburg, 50
Havana, 20
Hiogo, 300
Hong Kong, 10
Leghorn, 80 15
Madras, 25
Malaga, 30
Malta, 14
Marseilles, 75
Messina, 50 bgs.
M. Video, 45
Montreal, 425 75
Nantes, 34
Newfairwater, 100
N. Orleans, 50 75
Odessa, 220
Paris, 306
Penang, 2
Pt. Natal, 70
Porto Alegre, 2
Riga, 245
Rotterdam, 147
St. John, N.B., 550
San Francisco, 200 40
Santander, 25 brls.
Seville, 83 73 29
Singapore, 4
Smyrna, 20
Sourabaya, 2
Stettin, 15 10
Talcahuano, 100
Tampico, 120
Valencia, 7
Wellington, 100
Yokohama, 1,000

Sodium Bichromate—
Oporto, 3 cks.

Sodium Carbonate—
Boston, 56 brls.
Rio de Janeiro, 2.. cs.

Sodium Chlorate—
Gothenburg, 5 kgs.
Hamburg, 5 11 dms.
Stettin, 134 bgs.
Tampico, 20
Vera Cruz, 10 brls.

Sodium Hyposulphate—
Genoa, 15 kgs. 1 ck.

Sodium Phosphate—
Lisbon, 1 ck.

Sodium Silicate—
Antwerp, 24 brls.
Rotterdam, 15 cks.

Sodium Sulphate—
Boston, 100 bgs.

Starch—
Lisbon, 8 cks.

Sulphur—
Parnahyba, 10 c. 3 q. £3
Boston, 225 t. 6 731
Montreal, 75 3 274
Cadedello, 1 3 10

Sulphuric Acid—
Pernambuco, 4 c.
Paranagua, 18

Superphosphates—
Bordeaux, 49 t. 5 c. 1 q
Teneriffe, 10
Port Lanray, 160 3
Stettin, 1,000

Tannic Acid—
Santos, 9 c.

Varnish—
Accra, 4 dms.
Alexandria, 19
Genoa, 4 cks.
Hong Kong, 30
Mayaquez, 4

White Lead—
Ferrol, 1 ck.

Zinc Chloride—
Bombay, 2 t. 10 c.
Boston, 1

MANCHESTER.

Week ending August 19th.

Alum—
Tripoli, 13 cks.

Ammonium Carbonate—
Antwerp, 14 cks.
Rotterdam, 10 kgs.

Ammonium Chloride—
Beyrout, 3 brls.

Aniline Colours—
Rouen, 1 kg.
Rotterdam, 1 cs.

Aniline Oil—
Hamburg, 4 dms.
Rotterdam, 5 tins.

Aniline Salt—
Rotterdam, 10 cks. 6 pns.

Chemicals (*otherwise unenumerated*)—
Alexandria, 20 cks.

Cottonseed Oil—
Tunis 98 brls.

Dextrine—
Bahia, 6 cks.

Dyestuffs (*otherwise unenum.*)—
Gothenburg, 1 ck.

Linseed Oil—
Tunis, 2 brls.

Magnesia—
Susa, 1 tce.
Tunis, 2

Salt—
Rotterdam, 200 t.

Soap—
Malta, 5 cs.
Hamburg, 1 brl.

Soda—
Cronstadt, 168 cks.

Soda Alkali—
Cronstadt, 30 cks.

Soda Crystals—
Gibraltar, 23 brls.

Sodium Bicarbonate—
Sousse, 6 kgs.

Sodium Silicate—
Sfax, 20 cks.

Sodium Sulphate—
Bombay, 25 kgs.

Sulphur—
Boulogne, 10 cks.

Tar Oil—
Antwerp, 2 kgs. 2 dms.

Toluol—
Rotterdam, 30 brls.

Zinc Chloride—
Bombay, 5 cks.

HULL.

Week ending August 15th.

Alkali—
Bremen, 100 dms.
Messina, 15 cks.

Barium Carbonate—
Stettin, 100 t.

Benzol—
Amsterdam, 24 brls.
Rotterdam, 24 46 cks.

Bleaching Powder—
Danzig, 62 cks.
Venice, 25

Caustic Soda—
Trieste, 30 dms.
Wyburg, 10 cks.
Wasa, 5 3 cs.

Chemicals (*otherwise undescribed*)
Amsterdam, 12 cks. 20 kgs.
Antwerp, 2 cs.
Abo, 100 pks.
Bari, 15
Copenhagen, 7 10
Christiania, 4 3
828 slabs
Drontheim, 10
Danzig, 20 1 2
Gothenburg, 1 20 kgs,
Hamburg, 6
Helsingfors, 3 1
Konigsberg, 30 10 pks.
New York, 3 18 25
Rotterdam, 37 122
19 brls.
Stettin, 1
Trieste, 5
Venice, 34 24

Cottonseed Oil—
Amsterdam, 1,512 c.
Antwerp, 1,240
Copenhagen, 137
Christiania, 34
Danzig, 100
Gothenburg, 151
Ghent, 100
Hamburg, 898
Rotterdam, 1,664
Stettin, 200
Stavanger, 40

Creosote—
Copenhagen, 10 brls.
Stettin, 10
New York, 250

Glue—
Ghent, 40 bgs.

Linseed Oil—
Amsterdam, 139 c.
Antwerp, 350
Bergen, 24
Bremen, 8
Christiania, 548
Christiansand, 35
Christiansund, 53
Drontheim, 231
Hamburg, 400
Rotterdam, 101
Stavanger, 173

Manure—
Abo, 1,000 bgs.

Painters' Colours—
Amsterdam, 2 cks. 1 cs. 5 dms.
2 pks.
Antwerp, 36 16
Abo, 20 1
Bremen, 2
Bordeaux, 3
Copenhagen, 16 3 1 pk.
Christiania, 4 dms. 124
Drontheim, 1
Danzig, 35 cks.
Dunkirk, 5
Gothenburg, 5
Ghent, 10 1
Hamburg, 62 1 33
26 dms.
Helsingfors, 131
Norrkoping, 85
New York, 45 50
Rotterdam, 8 2 dms.
Rouen, 1 pk.
Stettin, 25 2
St. Petersburg, 1
Venice, 12
Wasa, 15

Paraffin Wax—
Konigsberg, 10 cks.

Pitch—
Amsterdam, 11 cks.
New York, 195
Rouen, 5 t.
Antwerp, 245
Abo, 1

Tallow—
Dunkirk, 110 cks.
Gothenburg, 5

Tar—
Amsterdam, 1 ck.
Antwerp, 10
Abo, 9
Copenhagen, 10
Helsingfors, 40
Rotterdam, 16
Stavanger, 3
Uleaborg, 40
Wasa, 25

Varnish—
Amsterdam, 5 cks.
Antwerp, 1 cs.
Bordeaux, 2
Ghent, 1 1
Hamburg, 3 1
St. Petersburg, 1
Wasa, 15 brls.

GLASGOW.

Week ending August 20th.

Albumen—
U.S.A., £109

Ammonium Sulphate—
Barbadoes, 40 t. 14½ c.
Demerara, 124 16
Nantes, 70 11¼
Hamburg, 30 8
Barcelona, 123 17¾
Valencia, 70 9½
France, 25 4

Asbestos—
Demerara, £57

Benzine—
France, £30

Bleaching Powder—
Calcutta, £354

Boracic Acid—
Barcelona, 1 t. 13¾ c.

Borax—
Stockholm, 929 t.

Caustic Soda –
Calcutta, 35 t.

Coal Products—
Creosote
France, £1,020
Creosote Oil
Christiania, £18
Bordeaux, 375
Pitch
Hamburg, 54 t. 6 c.
Havre, £750
Canada, 183
U.S.A., 43
Tar
Christiania, £35 15s
Riga, 470 brls.

Coal Products (*otherwise undes.*)—
Rotterdam, £1,620

Copperas –
Bombay, £140

Cresylic Acid—
U.S.A., £45

Dextrine—
Canada, £25
U.S.A., 251

Extracts—
Canada, £65 17s.
Covilha, 70
Lisbon, 43 14

Gelatine—
U.S.A., £1,042

Iodine—
Rotterdam, £1,330

Iron Sulphate—
Bombay, 16 t. 11½ c.

Lime—
Demerara, 10 t. 1 c.

Linseed Oil—
Demerara, 2 t. 1¾ c.
Kingston, 5 ¾
Trinidad, 1 8½
Bundaberg, 19½
Hong Kong, 9 12
St. John's, N'fd., 1 6½
Algoa Bay, 2 7¾
Canada, 5 2¾
Cape Town, 1 9¼
Mauritius, 2 8
Port au Prince, 2 2¼

Litharge—
Antwerp, £35

Manure—
Barbadoes, 25 t. 1¾ c.
Berbice, 20
Demerara, 18
Nantes, 5 6½

Paint—
Demerara, £30
Kingston, 79
Trinidad, 88
Brisbane, 162
St. John's, N'fd., 53
Canada, 43
Havana, 50

Painters' Colours—
Demerara, qty.
Bundaberg, £129
Rockhampton, 46
Cape Town, 72

Paraffin Wax—
Bordeaux, £86
Barcelona, 244
Valencia, 60
Stockholm, 187
Riga, 32 t.

Phosphoric Acid—
Demerara, £24

Plumbago—
B. Ayres, 2 t. 14½ c.

Potassium Bichromate—
Barcelona, £347
Rouen, 633
Lisbon, 20
U.S.A., 987

Soap—
Barbadoes, 4 t. 14 c.
Demerara, 10 17¾
Trinidad, 34 10
U.S.A., 2 7¼
B. Ayres, 2 12½
Antigua, 1 5
Port Louis, 5
Transvaal, 7 5

Sodium Bichromate—
Barcelona, 3 t. 15¼ c
Rouen, 19 4
U.S.A., 11 ½

Stannous Chloride –
Demerara, £48

Starch—
Germany, 2 t. 15 c

Sulphur—
Trinidad, £45
Demerara, 57

Sulphuric Acid –
Trinidad, £50

Tallow—
Trinidad, £78 16s.
Lisbon, 11 t. 2 c.

Treacle—
Christiania, 10 t. 12 c.
Stockholm, 25 3
Gothenburg, 20 ½
Halmstadt, 6 14½
Christiansund, 6 1

White Lead—
B. Ayres, 5 t. 16¼ c.
Algoa Bay, 1 6½

Whiting—
Queensland, £40

Zinc Ashes –
Rotterdam, 37 t.

TYNE.

Week ending August 15th.

Acids—
Bergen, qty.

Ammonia—
Bergen, 2 q.

Ammonium Sulphate—
Palermo, 5 t.

Antimony—
Antwerp, 1 t.
Hamburg, 5

Asbestos—
Copenhagen, 6 t. 16 c.

Barium—
Hamburg, 1 t. 15 c.
Rouen, 10 5

Barium Carbonate –
Hamburg, 153 t. 10 c.

Bleaching Powder—
Christiania, 16 t. 18 c.
Antwerp, 40 13
Trieste, 5 18
Rotterdam, 7 18
Odense, 10 1
Gothenburg, 36

Caustic Soda—
Antwerp, 20 t. 3 c.
Hamburg, 34 15
Ghent, 2 14
Rotterdam, 1 q.
Gothenburg, 4 18

Fluor Spar—
Gothenburg, 60 t. 16 c.

Litharge—
Christiania, 12 c.
Rotterdam, 5
Copenhagen, 5
Gothenburg, 1 t. 7

Magnesia—
Hamburg, 3 c.

Naphthaline—
Riga, 25 t. 10 c.

Paint—
Antwerp, 2 t.
Trieste, 5 15 c.
Smyrna, 1 7
Bilbao, 1 13
Rotterdam, 2

Painters' Colours—
Rotterdam, 7 c.

Phosphorus—
Seville, 1 t. 9 c.

Plumbago—
Bergen, 4 c.

Potassium Chlorate—
Trieste, 1 c.

Rosin Oil—
Hamburg, 1 t. 15 c.

Soap—
Rotterdam, 1 q. 14 lbs.

Soda—
Christiania, 5 t. 3 c.
Antwerp 5 1
Trieste, 5 15
Hamburg, 43 2
Randers, 11 16
Smyrna, 8 2
Rotterdam, 20 8
Genoa, 25 2
Nakskov, 2 7

Soda Ash—
Trieste, 17 t. 2 c.
Rotterdam, 1 12
Gothenburg, 85 4

Sodium Sulphate—
Antwerp, 50 t. 2 c.

Sulphate of Lime –
Genoa, 2 t. 7 c.

Sulphur—
Antwerp, 25 t. 4 c.
Hamburg, 100 1
Gothenburg, 20

Superphosphates –
Riga, 287 t. 18 c.

Tallow—
Rotterdam, 1 q.
Genoa, 3 t. 8 c.

Turpentine—
Rotterdam, 2 tins.

Varnish—
Bergen, 1 c.

White Lead—
Copenhagen, 5 t. 8 c.

GOOLE.

Week ending August 12th.

Chemicals (*otherwise undescribed*)
Amsterdam, 2 cks.
Antwerp, 1 cs.
Harlingen, 20

Coal Products (*othe wise undes.*)—
Antwerp, 1 ck.
Boulogne, 53 3 cs.
Rotterdam, 72

Colours—
Amsterdam, 2 cks.
Ghent, 1 4 cs.
Hamburg, 2
Rotterdam, 2

Dyestuffs (*otherw se undescribed*)
Ghent, 1 cs.
Hamburg, 60 cks.

Manure—
Boulogne, 28 bgs.
Dunkirk, 200
Ghent, 100
Rouen, 250

Pitch—
Antwerp, 183 t.

GRIMSBY.

Week ending August 15th.

Chemicals (*otherwise undescribed*)
Dieppe, 15 cks.
Rotterdam, 20 dms.

Coal Products (*otherwise undes.*)—
Dieppe, 30 cks.

Colours—
Antwerp, 3 cks. 1 cs.
Dieppe, 10
Hamburg, 1
Malmo, 1
Rotterdam, 2

Superphosphates—
Esbjerg, 2,140 bgs.

PRICES CURRENT. WEDNESDAY, AUGUST 26TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids :—			
Acetic, 25 °/₀ and 40 °/₀ .. ..per cwt.	5	6 &	8 6
,, Glacial .. .. ,,		10/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	1	0
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	7	6
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &		35/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. per ton	7	12	6
,, ,, (grey) Hull .. .. ,,	7	12	6
Aniline Oil (pure) .. .. per lb.	0	0	10¼
Aniline Salt ,, ... ,,	0	0	9¾
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42,6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	15	0
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	12	0	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	4	0
,, 50/90 ,, ... ,,	0	3	0
Carbolic Acid (crystallised 40°) .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	2	2
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	0	11
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	47	2	6
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	5	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	2	6
,, ,, (grey) (ex ship .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Caloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	15	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	8
Oils :—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	6½
Stearine .. .. per ton	21	0	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. ..nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	0
,, Chlorate .. .. per lb.	0	0	4½
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	12	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	6¼
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	15	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5¾
,, Borate (Borax) .. .. net, per ton	20	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	5	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	5	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	10	0
,, Manganate, 25 % .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	10½
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	15	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	5
,, Sulphate (Salt-cake) .. .. per ton.	1	1	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton.	6	5	0
,, (Roll Brimstone) .. .. ,,	6	5	0
,, Brimstone : Best Quality .. .. ,,	4	10	0
Superphosphate of Lime (26% .. .. ,,	2	17	6
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	63	0	0
Zinc (Spelter) .. .. ,,	17	3	9
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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CURRENT TOPICS.

"TU QUOQUE, BRUTE!"

ABOUT two years ago, when the Ship Canal was making its first struggle to secure a legitimate share of chemical traffic, and Liverpool was endeavouring to assume an attitude of contemptuous indifference, we had occasion to refer to the threatening and doubtful methods which were then adopted by Liverpool shippers in their efforts to kill the competition of the Ship Canal.

Despite their wiles, however, this particular form of traffic has steadily grown, as have also other branches. The result has been that, no longer able to keep up the pretence of indifference, an internal conflict has begun as to the ways and means by which the Ship Canal ought to be fought. In substance it has been said by many, in various ways, that it is useless to blindly flatter themselves that the Canal can never have any effect upon the shipping trade of Liverpool. It is true that up to now the Company has had to live upon the crumbs of trade which it has been able to gather up, and at times it has had to go hungry, but there is not wanting evidence to show that they may, and probably will, find sufficient sustenance in these crumbs to enable them ultimately to buy flour and bake for themselves.

Under these circumstances one of the most arrogant of the Liverpool organs has at length thought fit to put a curb upon its self-adulation, and, by way of a change, has first mounted the high horse of injured innocence, and then spurred into spasmodic activity its powers of raillery and declamatory invective. We have about got used to the hysterical vapourings which have for so long been characteristic of the Liverpool Dock Board, but when an outburst, such as we have recently been treated to, has its origin in a fair, though may be determined form of competition, it is about time, we think, to act upon the defensive.

It is stated, in an effort to expose the alleged competitive mal-practices of the Ship Canal Company, that they have been guilty of "outrageous and unscrupulous practices," and this heavy indictment, it appears, has for its basis the fact that the Ship Canal Company are offering a bonus of 20 % of the net toll and wharfage received on the cargo of all steamers loaded by Liverpool firms at an American port, on the condition that the whole cargo be engaged at the current Liverpool rate of freight. This may smack of the "cutting" system, and, doubtless, in the opinion of our autocratic neighbours, is deemed "outrageous," but we must emphatically draw the line at the "unscrupulousness" of the proceeding.

In supporting this position it may be as well, perhaps, to contrast the method which the Canal Company is employing to secure patronage with the competitive tactics of Liverpool shippers. The Canal Company offer a premium, and by so doing they proportionately diminish their profits. It is an inducement which they offer at their own expense.

Contrast with this the "boycotting" principle adopted by Liverpool shippers, when, two years ago, certain manufacturers in the chemical trade sent a small experimental consignment by the Ship Canal, though the bulk of their goods were still being shipped *viâ* Liverpool. When the shippers at the latter port heard of the experiment, they immediately advised the manufacturers that the freight on the goods going through Liverpool had been increased by fifty to a hundred per cent., and would remain so unless they contracted to ship through Liverpool only. Moreover, they did not tell them at the same time that the rates of competing manufacturers (who had pledged themselves to ship entirely through Liverpool) had simultaneously been *reduced* to a proportionate extent. This sort of thing is something worse than "cutting."

Needless to say, in this particular instance they carried their point; but, in the face of such "gentlemanly" coercion, it is amusing, to say the least, to hear the Manchester Ship Canal Co. charged with adopting "outrageous" and "unscrupulous" practices. The Canal must have traffic by hook or by crook, and if it offers better advantages than the Liverpool Dock Board, the latter in seeking to alleviate matters must cease keeping company with the sluggard and the snail, instead of merely vilifying the Canal Co. for having disturbed their siesta.

When the elephant trumpets in this sort of way, every blast, no matter how long or blatant, is only resonant of that tell-tale note—fear. It would be far more compatible with the reputed traditions of the great port to change their pitch and tootle in the fighting key; but it must be a fair fight if they also want fair treatment in return. Boycotting is not competing, nor to threaten fighting.

THE GLASS TRADE.

The declining state of this industry has for a long time been a source of anxiety to all interested therein. Though it has been difficult to explain the precise reason, it has been very evident that the industry has, bit by bit, dwindled to lamentably insignificant proportions, when compared with the rapid strides which are being made in other countries.

An insight into one of the most probable reasons for this decline is to be found in a statement made in the official organ of the National Flint Glass Makers' Society. It appears that the amount of out-of-work allowance being paid to the members of the Society, who number about 2,000, has risen to the sum of £700. during the last quarter. It also appears that glass-workers are hedged in with Union rules and restrictions, and that they are really greater slaves under the tyranny of their Union than it is likely they would ever be under any employer.

Trade Unions are desirable, and, under proper management, capable of much that is good, but under indifferent or self-seeking administrators they become something very different. Practically they foster the incompetent and set a premium upon sloth. They do not always, as is claimed for them, operate for the general good of those they profess to protect, for elsewhere in our columns this week it is shown that in the glass trade, at all events, they act solely for the benefit of the few that they may earn much, to the detriment of the many who earn nothing. It is not trade unionism that caused a Lancashire engineering firm to spontaneously give an advance to 2,000 of their employees, and it also wants no trade union to enable Oldham operatives to lay by, between them, over £140,000, to be spent wisely and beneficially in a well-earned holiday. On the contrary, when, as we have just stated, they benefit the minority at the expense of the majority, they spread discontent.

We have heard much of Belgian competition lately, and it would seem that over there they are fully alive to the dangers of the agitator. Labour is cheap, which in the language of trade union officials means underpaid, but the people seem contented, and the Government are evidently anxious to keep them so. They may have been a little precipitate in actually imprisoning an English labour leader, but their attitude towards a few of the latest arrivals who have interested themselves in the National Union of Dock Labourers is, to say the least, straightforward. They don't actually say it in so many words, but in effect their attitude says, "Please behave yourselves while you are here, or else out you go." The same principle might be employed to advantage in this country.

The statement which is given elsewhere of the dispute which has arisen at the Brierley Hill glass works is a striking instance of how the Glass Workers' Union works contrary to the interests of its members, and in this case we should very much like to see the returns from a plébiscite of the glass workers. We think their secretary would have to find a fresh situation.

THE BRITISH ASSOCIATION MEETING.

At the forthcoming meeting of the Association at Liverpool there promises to be a programme of considerable interest. The address of the President, Sir J. Lister, is so far a profound secret. The President of Section A, Mathematical and Physical Science, is Professor J. J. Thomson, F.R.S., who fills the Chair of Experimental Physics at Cambridge. In his address he will deal with such important topics as the teaching of physics, cathode and Röntgen rays, the passage of electricity through gases, and the movement of the ether.

Dr. Ludwig Mond, F.R.S., will preside over Section B, Chemistry, and in his address will deal mainly with the history of the manufacture of chlorine, with special reference to the influence of the progress of pure science upon its development. With regard to the general work of the section technical papers will probably occupy a large portion of Friday's meeting, including a paper and report by Professor Bedson on the "Composition of Coal." On Monday Professor Ramsay will read a paper on Helium, and there will be a number of other communications on Helium and Argon. On the same day Professor Norman Lockyer will read a paper on "The Synthesis of the Elements." It is hoped that this will lead to a discussion, to which Mr. Crookes and others have promised to contribute. Other matters of interest will be an exhibition of photographs of explosions in various gaseous mixtures by Professor Dixon, and the report of the Committee on Science Teaching in Elementary Schools, which will be followed by a paper on Science Teaching in Girls' Schools by Miss Walters. In view of the interest which will probably be taken by members of the section in the numerous chemical works of the district, arrangements have been made for members of the section to visit several of the most interesting of these on special afternoons.

The Manchester Water Supply.—The prudence of the Corporation in obtaining a supply of water from Thirlmere in addition to that which they possessed in the Longdendale Valley has been abundantly proved—if further proof were needed—by the events of the past few months. There were long periods of dry weather during the spring and summer, so that without the Thirlmere supply the Waterworks Commitee would have been hard pressed to meet the public requirements. As it is the committee have been able, without the least trouble, to meet the demands upon them. These demands, it should be remembered, are constantly increasing. Two years ago the average daily consumption of water was 25,000,000 gallons; now it is 28,000,000 gallons, some seven or eight millions being drawn from Thirlmere Lake. It will be interesting to many people to learn what a great difference there is between the rainfalls at Woodhead and Thirlmere. At Woodhead during the seven months ended July 31st there was a fall of 22·36 inches, against 24·26 inches in the corresponding period of last year, whereas at Thirlmere for the same period this year there were 40·8 inches, and only about 28 inches in the first seven months of 1895.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Manufacture of Acetylene and Apparatus therefor. R. P. Picket. 18,207. Aug. 17.

Purification of Acetylene and Apparatus therefor. R P. Picket. 18,208. Aug. 17.

Improvements in the Manufacture of Magnesium Sulphate. M. N. d'Andria. 18,239. Aug. 18.

Improvements in Deoxidizing Furnaces. H. A. Jones. 18,259. Aug. 18.

Manufacture of Tannin Extract from Sulphite Cellulose Lyes. M. Hönig. 18,265. Aug. 18.

Tanning Skins. W. P. Thompson. 18,278. Aug. 18.

Degreasing Wool, etc. F. N. Turney. 18,360. Aug. 19.

Automatic Rontgen Ray Apparatus. J. R. Quain and M. M. L. G. Tangère. 18,368. Aug. 19.

Improvements in the Purification of Sewage or Waste Waters. F. P. Candy. 18,444. Aug. 20.

Purifying Carbonic Acid Gas. J. Qurin. 18,468. Aug. 20.

Manufacture of Mottled Soap. W. H. Caird. 18,478. Aug. 20.

Acid Proof, Electrically Non-conducting Composition. W. Morison. 18,485. Aug. 20.

Treating Complex Sulphide Ores. F. Ellershausen. 18,494. Aug. 20.

Obtaining Cyanides in the Manufacture of Gas. W. T. Sheard and Sheffield United Gas Light Co. 18,575. Aug. 22.

Detergent and Bleaching Compounds. J. Hargreaves and R. Armstrong. 18,589. Aug. 22.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improved Apparatus for the Extraction of Cyanides and other Compounds from Illuminating and other Gases. F. Livesey, 709A, Old Kent-road, London, S E. Eng. Pat. 18,334. Oct. 1, 1895

In external appearance this apparatus is similar to the usual type of horizontal, central driven, revolving scrubber. Internally, however, a number of pockets or buckets are attached to the periphery of the perforated discs, which are fastened to and revolved by arms, springing from the hub of the central shaft. These buckets pick up a certain amount of the water or other scrubbing agent, which lies at the bottom of the apparatus, and continuously pour it down over the sides of the perforated discs, regularly presenting a thin film to the gases passing through the scrubber. The level of the liquid is kept constant in the usual way. Any solid matters that might settle out are also kept in suspension. An excessive flow of gas between the inside of the cylinder and the edges of the discs is checked by a fringe of brush work. There are two drawings.

Improvements in the Process for the Volatilisation of Galena into Compounds of Lead, and of Zinc into White Compounds of Zinc, the making of Litharge, and the Smelting of Metals from their Ores or Slags. A. C. J. Charlier, 107, Breadalbane-terrace, Hill-street, Glasgow. Eng. Pat 14,165. July 25, 1895.

A great number of patents have been taken out at one time or another to accomplish the objects set forth in the title, but the expense of fuel and upkeep, etc , has generally been excessive. A gas furnace is employed under this patent in conjunction with a hot-air blast, which enables the heat to be nicely regulated and an oxidising flame ensured. The gas is supplied under a pressure of about 60lbs. The bottom half of the furnace is of iron and water jacketted. The upper half is of fire brick, with an ore distributor and fume exit fixed in the top. The chief novelty is the construction of the grate of the furnace. The bottom is not flat, but the front portion slopes down to a saucer-like depression. The ore is sprinkled on to the slope, where it meets the gas and air flame (the latter being heated by passing through a pipe coiled round the upper part of the furnace), and is volatilized into lead sulphate, which passes off as a fume. Any ore which is not at once volatilized falls down the slope into the saucer, where it is reduced to metallic lead alloyed with any silver that may be present, and which would not be volatilized. A spout or channel passes from the saucer to the exterior of the furnace, so that when necessary the molten metal can be drawn off without stopping the furnace. In preparing litharge, the charge of pig lead is melted down and then played on by the gas and air, the scum of oxide being removed as it forms. For iron ores, slags, and residues the furnace is entirely built of fire brick and the water jacket dispensed with.

Process for the Manufacture of Weatherproof Gypsum, Stone, or Bricks. P. Kleber, Saarbrücken, Germany. Eng. Pat. 13,187. June 15, 1896.

Sifted ashes, potash, or other alkaline carbonates are mixed with gypsum and hydraulic lime. The mixture is next treated with gypsum water and then sulphuric acid. Under this treatment the potash is first causticised and carbonate of lime formed. The latter is decomposed by the acid forming calcium sulphate and liberating carbon dioxide, while the potash is converted into sulphate which washes out. In this way a plastic mass is obtained, which does not set at once and can be moulded. The moulded mass or brick is then treated with a solution of potash alum acidulated with sulphuric acid. This treatment ensures the conversion of the last traces of caustic potash into sulphate, as well as assisting the hardening by precipitating hydrate of alumina. The equations given as representing these reactions are wholly unreliable.

An Improved Disinfectant and Cleansing and Purifying Compound. E. Burton, 23, Champion Grove, Camberwell. Eng. Pat. 18,229. September 30, 1895.

The object is to produce a cleansing agent which shall retain its disinfecting properties for an indefinite period. To this end any suitable moss is disintegrated to a given mesh, either by hand or mechanically, and then impregnated under pressure with any disinfectant, such as carbolic acid, permanganate of potash, or eucalyptus oil. There is no mention of how the cleansing properties are conveyed, beyond the statement that the above preparation is to be the basis of the cleansing agent.

A New or Improved Method of, and Apparatus for, Removing Fatty Matters from the Effluent Waters of Wool Washing Machines, and the like. J. Holmes, 43, Princeville-street, Bradford, Yorkshire, H. E. Tankard and W. Scaife, both of Wellington Mills, Laisterdyke, Yorkshire. English Pat. 18,239. Sept. 30th, 1895.

Instead of the usual acid treatment to throw up the fat as a magma, the washings are slightly acidified with sulphuric acid (1 quart to a 100 gallons of effluent water) and blown with air in a tank. The fat rises as a scum or froth which is skimmed off by scrapers carried on an endless belt. The presence of a small quantity of acid assists the formation of the scum. The air blast is continued until the scum no longer rises, the scum being subsequently neutralized with acid, and the fatty matters recovered in a concentrated form. Much less acid is thus required than in the old process. Small subsidiary, perforated air pipes are fixed at the bottom of the tanks so that any sediment which may settle out can be stirred up and run off. The level of the scum is kept constant by regularly running in fresh washings to replace the scum removed. There are four drawings.

An Improved Method and Apparatus for Removing Tar, Pitch, Oil, Grease, and similar matters from Wool, Fur, and the like. S. W. Wilkinson and the Grove Co., Ltd., 17, Coleman-street, London, E C. Eng. Pat. 16,143. Aug. 28th, 1895.

Though suitable for many purposes, this process is specially intended for removing grease from the felt "forms" used in the manufacture of hats. Scouring with soda and oil emulsions has proved uncertain in action, as well as adversely affecting the subsequent dyeing process. In this invention benzol or another suitable solvent is used in a plant which is virtually a modified Soxhlet's apparatus, so arranged that the "forms" can be saturated with freshly distilled solvent, and the fat and pitch laden solution syphoned off continuously. The container is fitted with a steam coil, and when the extraction is finished the solvent can be distilled off by a branch pipe (the cocks on the other pipes having been closed) through the same condenser that supplies the freshly condensed benzol distilled from the boiler. One special feature of the process is that the last traces of solvent can be driven off by filling the container with nearly boiling water, which expels the benzol (boiling at 80° C.) as vapour, and leaves the felt "forms" ready for the subsequent manufacturing operations. There is one drawing showing the plant in sectional elevation.

SCIENCE AND ART DEPARTMENT SCHOLARSHIPS.—The list of successful candidates for National Scholarships, Royal Exhibitions, and Free Studentships (Science), which has just been issued shows that three students from the Higher Grade School have been successful, as follows:—Ernest Larmuth, Engineering National Scholarship, value about £60 a year for three years, and tenable at the Royal College of Science, South Kensington, London; William Scholes, Royal Exhibition, value £50 a year for three years, and tenable at the Royal College of Science, London; Percy Kenyon, Free Studentship for three years at the Royal College of Science.

A CRITICISM OF ENGLISH SCIENTIFIC EDUCATION.

THE following is a letter addressed to Professor W. Ramsay by Professor Ostwald on the subject of scientific education, and subsequently communicated by the former to the *Times*.—"In our frequent discussion on scientific education, we have both often been struck with some points of very great difference between the English and the German way of dealing with it. As it may be asserted without national arrogance that University education is in Germany in a more satisfactory condition than in your country, you are, of course, anxious to know which of the German customs I consider most effective in bringing about this better state of things, and I will, therefore, try to point them out. Of course, I shall confine myself to the subject of natural science, and especially chemistry and physics, feeling myself unable to deal with sciences beyond my knowledge. The main point of our system may be expressed in one word—freedom—freedom of teaching and freedom of learning. The first involves for the teacher the necessity of forming in his mind a clear conception of the scope of his science, for, as he is free to choose any possible method of view, he feels himself answerable for the particular one he has chosen. And in the same way the student feels himself responsible for the method and the subjects of his studies, inasmuch as he is free to choose any teacher and any subject. One who has not seen this system in action may be inclined to think that such a system must lead to arbitrary and irresponsible methods on the side of the teacher and to confusion on the part of the student. But the former is avoided, because at the beginning of his career the teacher is dependent for his advancement on the results of his scientific views, and is naturally anxious to improve his position in the educational world. And as for the students, they themselves impose certain restrictions on their own freedom. Most of them feel that they require some advice and guidance, and they therefore follow the usual and approved order in conducting their studies. As to the inventive man of original ideas, it has often been proved that for him any way is almost as good as any other, for he is sure to do his best anywhere. Moreover, such a man very soon excites the interest of one of his teachers and is personally led by him, generally to the great advantage of both.

"Let us illustrate these general remarks by considering the course followed by an average chemist. In his first half-year he hears lectures on inorganic chemistry, physics, mineralogy, sometimes botany, and of late often differential calculus Moreover, the German student is accustomed to take a more or less strong interest in general philosophy or history, and to add in his *Belegbuch* (list of lectures) to the above-named *Fachcollegien* (specialised studies) one or two lectures on philosophy, general or German history, or the like. Very often there are in the University one or more popular professors whose lectures are heard by students of all faculties without reference to their special studies. The student who has heard during his stay at the University only lectures belonging strictly to his *Fach*, is not well thought of, and is to some extent looked down on as a narrow specialist. But I must add that such views are not prevalent in all faculties, and there are some—*e.g.*, the faculty of law—whose students confine themselves, with few exceptions, to attending exclusively lectures in that faculty.

"In the second half-year the chemical student begins with practical laboratory work. Notwithstanding the perfect freedom of the teachers, the system first introduced by Liebig into his laboratory at Giessen is still universally adopted in German Universities and technical high schools—viz., qualitative and quantitative chemical analysis, the former conjoined with simple spectroscopic work, the latter amplified by volumetric analysis. This is followed by a course of chemical preparations, formerly chiefly inorganic, now chiefly organic. Even here, a regular system is being widely developed, owing to the use of some well-known text-books. Of late years this course is followed in some laboratories by a series of exercises in physical chemistry and electro-chemistry.

"While these practical exercises, which last for three or four half-years, are being carried out, the student completes his knowledge of physics, mathematics, and the other allied sciences by hearing lectures and working practically in the physical and often also in some other laboratory. The exercises done, he goes to the professor and asks him for a 'theme' to begin his 'work'—viz., his dissertation for the degree of Dr. Phil. This is the most important moment in his life as a student, for it generally determines the special line of his future career. The 'theme' is usually taken from the particular branch of the subject at which the professor himself is working; but, as the scientific name and position of the professor depends, not only on his own work, but to a large extent on the work issuing from his laboratory, he is careful not to limit himself to too narrow a range of his science.

"Of course it is best of all if the student selects for himself a suitable 'theme,' suggested to him by his lectures or practical work, or from private study of the literature of the science. But this seldom happens, for the young student is not yet able to discern the bearing of special questions, and lacks knowledge how to work them out. Sometimes (but not very often, indeed) he points out to his professor in a general way the kind of problems he would like to work at, and the professor suggests to him a special problem out of this range of subjects. During the working out of his chosen subject the student learns generally much more than he has heard at lectures. Every part of the investigation forces him to revise the scientific foundations of the operations he performs. During this time the incidental short lectures given by the professor on his daily round from one to another of the advanced students are most effective in deepening and strengthening the student's knowledge. As these explanatory remarks are generally heard, not only by the student whose work has caused them, but also by a number of fellow-students working near, a fairly wide range of scientific questions are dealt with in their hearing. Often these small lectures develop themselves into discussions, and, as for myself, I judge from the frequency of such discussions between the students whether the session will turn out a good one or not. If the professor thinks the work sufficiently complete to be used as a dissertation, the student proceeds to the close of his studies. He prepares himself for the examination, which is conducted by the very professors whose lectures he has heard and in whose laboratories he has worked. This examination varies somewhat in different Universities, but in no case is it either very long or extensive; indeed, it is not considered as very important. For we are all aware what an uncertain means of determining a man's knowledge and capabilities an examination is, and how much its issue depends upon accidental circumstances. Part of this uncertainty is removed by the fact that the professor and the pupil know each other, are acquainted with one another's modes of expression and scientific views. The main purpose of the examination is to induce the student to widen his knowledge to a greater extent than is covered by the subject of his dissertation; but, indeed, it happens very seldom that a student whose work is considered sufficient does not pass the examination.

"We have no great fear that this system may induce a professor to treat his own pupils in too lenient a way, and so lower the standard of the doctor's degree. There was a time when such abuses used to occur, but there very soon arose such public indignation that the abuses ceased to occur. Even at the present day similar instances occasionally occur, but, as before remarked, the position of a professor depends in such a degree upon the value of the dissertions worked out under his supervision, that such deviations from the right way correct themselves in course of time. The most effective instrument for that purpose is the publication of all dissertations and the consequent public control over them; for this reason publication is, I believe, compulsorily prescribed in all German Universities.

"When the student has finished his course he is still entirely free to choose between a scientific and a technical career This is a very important point in our educational system; it is made possible by the circumstance that the occupation of a technical chemist in works is very often almost as scientific in its character as in a University laboratory. This is connected with a remarkable feature in the development of technical chemistry in Germany—the very point upon which the important position of chemical manufacture in this country depends. The organisation of the power of invention in manufactures and on a large scale is, as far as I know, unique in the world's history, and it is the very marrow of our splendid development. Each large work has the greater part of its scientific staff—and there are often more than 100 *doctores phil.* in a single manufactory—occupied, not in the management of the manufacture, but in making inventions. The research laboratory in such a work is only different from one in a University by its being more splendidly and sumptuously fitted than the latter. I have heard from the business managers of such works that they have not unfrequently men who have worked for four years without practical success; but if they know them to possess ability they keep them notwithstanding, and in most cases with ultimate success sufficient to pay the expenses of the former resultless years.

"It seems to me a point of the greatest importance that the conviction of the practical usefulness of a theoretical or purely scientific training is fully understood in Germany by the leaders of great manufactories. When, some years ago, I had occasion to preside at a meeting, consisting of about two-thirds practical men and one-third teachers, I was much surprised to observe the unhesitating belief of the former in the usefulness of entirely theoretical investigations. And I know a case where, quite recently, an 'extraordinary' professor of a University has been offered a very large salary to induce him to enter a works, only for the purpose of undertaking researches regarding the practical use of some scientific methods which he had been working at with considerable success. No special instructions are given to him, for it is taken for granted that he himself will find the most promising methods; only, in order to increase his interest in the business, part of his remuneration has been made proportional to the commercial success of his future inventions. From this clear understanding of the commercial importance of science by the directors of industrial establishments there science itself gains another advantage. A scientific man

can be almost sure, if he wants in his investigations the help of such technical means as only great works can afford, that he will get such assistance at once on application to any work; and the scientific papers of German chemists very often contain acknowledgements, with due thanks, of considerable help they have thus obtained.

"Besides these advantages for the development of scientific and technical chemistry in Germany, there exists another very important factor—practical assistance from the Government. Universities are in Germany affairs of the State, not of the Empire, and in no other point has the division of the Fatherland into many smaller countries proved itself to such a degree a boon and a blessing. The essential character of the German Universities, the freedom conferred by the independence of the numerous Universities, is never lost. There have been hard times occasionally for the Universities of one country or another; but some Universities were always to be found where, even in times of hard oppression, liberty of teaching and learning remained complete and unaffected, and the spirit of pure unalloyed scientific research was preserved and encouraged. So this palladium of intellectual freedom has never been lost; and it regained the former influence as soon as the casual oppression ceased. In our days there is among all the separate State Governments in Germany a clear conviction of the importance of practical support being given to pure scientific research. To take one instance, in order to facilitate teaching and research in electro-chemistry (a recently developed branch of science), a suggestion by some leading practical scientific men to the members of the Government was sufficient. Upon such a suggestion a considerable sum of money was spent first by the Prussian Government for the endowment of electro-chemical chairs and laboratories in the three 'polytechnic' colleges of that country; a short time afterwards it was resolved to erect at one of the Universities, Göttingen, an institute for physical chemistry, and especially electro-chemistry, in the shape of a building which has just been completed. At the same time other German countries have begun to grant to their Universities and technical colleges considerable sums of money for similar purposes—*e.g.*, the Saxon Landtag alone has unanimously voted half a million marks (= £25,000.) for the erection of a splendid labaratory for physical chemistry at Leipzig.

"You will excuse my boasting about our German management of this most important question of scientific education. It is no blind admiration without criticism, for I know by practical experience the management in other countries and I can compare them. And it is only for the sake of science itself that I write these lines. If they should help the spread of the conviction of the incomparable practical usefulness of every support given to pure science, together with the recognition of the fact that the latter can only grow in an atmosphere of liberty and confidence, I should regard it as tending towards the progress of science itself, and destined to exercise such an influence on scientific progress as may be compared with the discovery of the most remarkable scientific fact."

THE WILL OF THE LATE MR. RICHARD BEALEY.

ESTATE duty has been paid on £294,055. 15s. 11d., as the value of the personal estate of Mr. Richard Bealey, of the Close, Radcliffe, bleacher and manufacturing chemist, who died on the 3rd March last. The testator left to each of his trustees £200, and £100. a year during the continuance of the trust, for carrying on his business. He bequeathed to his wife £500., the use and enjoyment of his house and its furniture, and a life annuity of £3,000. Subject to Mrs Bealey's use and enjoyment, the testator left his house and furniture to his daughter, Elizabeth Gardner Bealey, and upon trust for her £60,000. He bequeathed upon trust for his grandsons, Frederick Arthur Harold Bealey and Cecil Bealey, £10,000 each, and upon trust for the children of his son, the late William Henry Bealey, £20,000. Mr. Bealey bequeathed also upon trust for Harry Bealey £15,000. He bequeathed £1,250. to apply the income towards the repairs of Radcliffe Close Wesleyan Chapel, so long as the usual morning prayers of the Church of England are read there, as ordered by the founder, but omitted from the trust deed, and £1,250. towards the support of the minister of the said chapel, so long as the usual morning prayers of the Church of England are read there and the pre-communion services, including the Commandments, are read there on Communion Sunday. The testator bequeathed in trust for the Radcliffe Close Wesleyan Day Schools, so long as the usual morning prayers of the Church of England are read there, £1,000., and to the Wesleyan Missionary Society £1,000.; the Wesleyan Home Missions, £1,000.; the Wesleyan Theological Institution, Didsbury, £500.; the Church Missionary Society, £1,000.; the Albert Asylum for Idiots at Lancaster, £1,000.; British and Foreign Bible Society, £1,000.; the Southport Convalescent Hospital, £500.; the Edgworth Home for Destitute Children, £1,000.; the Manchester School for the Deaf and Dumb, £500.; the Manchester Blind Asylum, £500.; and to the Boys' and Girls' Refuges and Homes and Children's Aid Society, Strangeways, Manchester, £500. Mr. Bealey left his residuary estate in trust for his son Adam Crompton Bealey. He authorised the trustees to continue his business, and he desired that the name of the firm should remain "Richard Bealey and Co." Stringent provision is made that any legatee contesting the will shall forfeit all benefit thereunder. By a codicil the testator reduced the legacies to the British and Foreign Bible Society and the Albert Idiot Asylum to £500. each, and the legacy for the repairs of the Radcliffe Close Wesleyan Chapel to £1,000. He also reduced the bequest to the Edgworth Home for Destitute Children from £1,000 to £500., and cancelled the gift of £1,250. for the support of the minister of the Radcliffe Close Wesleyan Chapel. He cancelled also the legacies to the Wesleyan Missionary Society and the Wesleyan Theological Institution.

EVEN THE CHINESE DON'T LIKE IT.

THERE is a "petroleum lamp question" in China it appears as well as in this country. No wonder the American S O. is so feverishly anxious for us to retain our present low flash point, if even the "heathen Chinee" is going to jib at their heavy naphtha distillates or "export oil," which does duty over here for petroleum. The following not only accounts for the milk in the cocoanut but also the hair outside:—British Acting-Consul Tratman (Chungking) states that the prohibition against the use of kerosene oil within the city—issued in consequence of the disastrous fire of August, 1894—was maintained to a great extent in 1895. The Consul is informed that the objection of the authorities to the use of this oil is not now particularly strong, and might be overcome, but that popular opinion, while permitting the employment of kerosene lamps in private compounds, sets its face against their use in small shops and tenements. The solution of the question is not easy. A safe lamp is beyond the means of the ordinary native, whilst the lamp that he can afford, roughly put together and with a thin glass reservoir, is without doubt a source of danger *The oil used is American, and of somewhat low flashing-point.* The import, which was 55,000 gallons in 1893, and 35,040 gallons in 1894, further declined to 12,700 gallons in 1895. The immense power afforded by the swift current of the Yangtse running at the foot of the city walls conjures up visions of a comparatively cheap production of electric light, but such visions are quickly dispelled when one sees a native wrangling for half-an-hour over a copper cash, ten of which make a farthing."

The Scotch oil trade should consider the position, and see if they cannot find a Roland for the many Oliver's they have had from the S O. in the last five years.

SINGULAR LAMP FATALITY.

THE Westminster Coroner recently held an inquiry respecting the death of Charles Davy, aged 38 years, a scaffolder, who was killed by a lamp explosion at Harrod's Stores, Brompton Road.—Alfred Cox, a labourer, of No 28, Latimer-road, Chelsea, stated that Davy was employed at the new building being erected for Harrod's Stores. They used the patent Starlight Night Lamps. The lamps were fed with "waste" and paraffin, and had to be alight a quarter of an hour before they could be turned full on. The full pressure was 25 lb., but they usually only used them at 15 lb. pressure, which was regulated by a gauge. The lamps were supposed to be quite harmless, and would last three hours, when they would go out of their own accord with safety. The container for the oil was usually very cool, and the one that exploded always appeared safe, and did not leak. The working of the lamp had been explained to Davy by the makers.—George Cook, a labourer, deposed that he was working near one of the lamps, and he noticed that the oil was leaking from the burner. It fired as it fell, and some of it dropped into the container. Witness called to Davy to come and see to it, and he went up the ladder to put it out, but before he could reach it it exploded, and he was instantly enveloped in flames, and fell backwards off the ladder. The lamp had only been refilled ten minutes when the explosion occurred.—Other evidence showed that three men besides Davy were injured, and that Davy died shortly after the explosion.—Mr. R. D. Brett, an engineer, stated that he was the inventor and manufacturer of the lamps. He attributed the explosion to the oil running over and falling on the container. He believed the running oil was due to one of the valves not having been properly shut off. The lamps were quite safe if properly used.—Inspector Woodley, London County Council inspector under the Explosives Act, remarked that this was the third explosion with lamps of this kind of construction, and the second fatal case.—Ultimately the jury returned a verdict of accidental death, but added a rider to the effect that they considered someone better informed on the working of the lamps should have been in charge.

THE ENGLISH GLASS TRADE.

AT the present time only about one-tenth of the glass used in this country for ordinary purposes is of British manufacture. While Continental glass firms are pouring their productions into England, the English trade is languishing, and in the last quarterly issue of the *Flint Glassmakers' Magazine* it is stated that the payments to the unemployed for the previous quarter were upwards of £700. This is at the rate of £2,800 a year for out-of-work allowance to the members of a society numbering only a little over 2,000. The men's own organ says:—"If we are to go on in this standstill fashion it will only be a question of a few years and we shall see more than one-third of the trade on the superannuation list. . . . It is too dreadful to think of—in many cases men in the prime of life, yet 'done' as glassmakers."

That there is something very much amiss in the trade is admitted both by masters and men. The former have no doubt about the cause, and say that the English trade can never be recovered while the present conditions imposed by the men's society are in force. The prestige of the best class of English-finished glass is fully maintained, and it has held its own in the market. But much of this glass is glass for the luxurious and wealthy, and is not the class of manufacture which goes in bulk into consumption—namely, what is generally termed hotel glass, and such as is used for ordinary table purposes. For this the demand is very great and constant, and it seems to be directly owing to the action of the men's society that all but a fraction of this trade has been lost to the home producer, and has passed into the hands of Belgians, Germans, and Swedes. The French make a better class of work, but are not competitors in the English market for the trade in hotel glass. One well-known glass works on the Rhine employs more men than the whole of the members of the First Glass-makers' Society of Great Britain and Ireland number. Yet the writer is assured by a gentleman thoroughly conversant with the trade and qualified to speak on the subject, that if a reasonable working system were adopted in the English trade there is no reason why a thousand glass-workers might not be employed in England where now there are only a hundred. The society men, as a matter of fact, have for many years been master of the situation, and are unreasonable in the maintenance of the system under which the English glass trade has been dwindling away. In 1858 there was a great struggle, which cost their society upwards of £50,000., and it ended in an agreement as to the apprenticeship system, which has since greatly fettered the trade and helped to prevent its development. Instead of development, indeed, there has been continual shrinkage and contraction, and one glass house after another, not only in the principal seat of the industry, but in a number of districts, has gone out of existence. Hence it is that the men's executive are now lamenting the large number of unemployed members on their books. In the glass trade there are three men to a "chair"—a "workman" (formerly called a "gaffer"), a "servitor," and a "footmaker;" and generally two "lads" in addition. Only the three first named are allowed to be members of the Glassmakers' Society. The union will not allow the so-called "lads," who are in some cases between twenty and thirty years of age, to become glass-makers, except in a few cases and after a formal apprenticeship. No more than one apprentice is allowed to two "chairs," so that the admission of new hands to the best positions in the trade is strictly kept down, and these best positions are kept as a kind of close preserve for the members of the men's society. As one consequence of this there is a great disparity in the wages paid in the trade. The glass "makers" get remarkably good wages, and though the skill which is required on the part of a glassblower is no more than is required for a good glasscutter, the former often gets double the earnings of the latter. The cutter gets about 36s. a week, while the maker may in some cases get up to £3 10s and £4., and even more. In hardly any other trade in the country are better wages earned than by the glassblowers, and this without being subject to excessive hours of work. The standard week's work for glassmakers is five "turns" of six hours each, and a "move" of three hours, but as a matter of fact they make in many cases eight turns a week, or a total of 48 hours, and it is stated that when deduction has been made for meal times and loss of time in beginning and leaving work there remains only 40 hours of which the employer gets the benefit. For the time beyond the 5½ turns which form the ordinary week's work there is an extra payment for the extra turns. If there happens to be an accident and the men cannot work, they, nevertheless, demand, and not only demand but are paid, half wages. One of the things which tells against the employer is the men's "shut." So many articles have to be made in a "turn," which it has been stated consists nominally of six hours' work, but if he makes his appointed number in three or four hours the society's rules—there are unwritten as well as written ones in force—do not allow him to go on working, though it would be to his own pecuniary benefit as well as to his employers' advantage. Restriction, in fact, fences the trade in, and there is practically little if any freedom of action for masters or men.

The dispute which has arisen at Messrs. Stevens and Williams's Brierley-hill Glass Works, in the Stourbridge district, is as forcible an illustration as could be found of the position in which employers are placed by the action of the men's society. [Not the *men*, be it noted. —Ed. *C.T.J.*] The firm in question consented to re-engage a man who had been discharged, and whose conduct the society did not uphold, and to pay him 56s. a week. This was not good enough for him, because he had formerly had a still higher wage (though at different work), and the society insisted on all the other men at Messrs. Stevens and Williams's giving 14 days' notice to leave work because the demands made were not agreed to. Even the workmen of the firm, though complying with the orders of their society to give the notices, do not wish to leave, and have protested against the action of their society, but say they have to comply with the resolution passed. If they leave, it has been said by one who has been a leader in their ranks that they will do so with tears in their eyes. The notices expire on Monday next, and Messrs. Stevens and Williams, in order not to have their works standing, are now advertising for non-union men and offering to engage suitable workmen for a fixed term of years.

If English glass manufacturers had a free hand in the matter of the arrangements with glassmakers, and the men would agree to put in more hours' work, the employers, while still paying good wages, would be enabled to compete with the foreigners. "We could beat the foreigners into fits," was the remark made on the subject to the writer. As it is, glasshouse after glasshouse is being shut up, a limited number of men get very high wages, a large number get none at all, and are receiving unemployed pay from their union. The foreign producer is thriving while the English firms engaged in this industry are becoming fewer and fewer in number. Yet, even under the present trying conditions, one class of hotel glass can be made (by the aid of new methods) at a price to compete with the foreign article, and if the men would consent to work a "turn" of nine instead of six hours, it is said the trade that has drifted into the hands of the foreigner might be recaptured. "The future prosperity of the English glass trade," it is asserted, "depends in a great measure on the action in the English glassblower." Side by side with this are the acknowledgments of the men's trade magazine of hundreds of men being unemployed, and the anomalous spectacle now afforded of their society compelling all the men in the employ of a large firm to strike because a man out of work was not content with an offered wage of 56s a week and insisted on being paid more! The men have it partly in their own hands to help to revive the drooping fortunes of the English glass trade, and if they would only resolve on a new departure and abandon the system which has had such disastrous results, there is no reason why there should not by degrees be thousands of additional hands employed in this industry. —*Times.*

ENGLISH v. BELGIAN CEMENT IN NATAL.

THE Belgian Consul-General in South Africa pointed out in a previous report that Belgian cement depended for its success in competing with other cements on the rate of freight. He now writes: "Many of our compatriots residing in South Africa understood this, and put themselves in communication with Belgian manufacturers; since then the import of our cement has done nothing but advance in the Colony. Some months ago, sailing vessels, chartered by a Belgian syndicate, shipped cement direct to Natal; the freight has fallen below 20 shillings per ton. The quality of the Belgian product and its sufficiently low price f.o.b. Antwerp has ended in driving the similar English or German article out of the market." The Consul-General points out that Belgians, to gain on the market, must be kept well informed of the condition of the market and stocks. "Take cement for an example," he says. "At this moment, it is in strong demand; what do our English competitors do? Seeing the urgency, they cable to their agent from here for the consignment of so many tons of cement at a freight of 20s. per ton, to be sent by steamer (the English steamship companies have in fact lowered the rate of freight for cement from 27s. 6d to 20s. per ton to extinguish the transport of Belgian cement by sailing vessels, of which I have spoken above). Our producers, on the other hand, not having a local agent, and despatching by sailing vessels, cannot be in time, and Belgian cement, however superior in quality and price compared with English cement, will be supplanted by the latter."

The "Photogram."—The September issue of this excellent photographical monthly is a special one. Among the many interesting articles dealing fittingly with winter occupations of a photographical nature, there is in particular an article on "Beauty Spots of London," which describes and illustrates, with seventeen reproductions, many of the less-known beauty spots of the metropolis. There is also an appreciation of H. H. Hay Cameron by Gleeson White, with reproductions of Mr. Cameron's work.

Selected Correspondence.

SCIENTIFIC EDUCATION IN ENGLAND AND GERMANY.

To the Editor of The Times.

SIR,—Your article on the letter from Professor Ostwald, communicated by my friend Professor Ramsay, is, I think, the first real appreciation of the actual state of the position in which our chemical industries stand which has appeared in the Press.

The outcry for more schools and greater expenditure is senseless until the public is educated to rightly value science.

The nation has always obtained talent when it wanted it. If native knowledge and skill could not be had then foreign was imported. In the case of art the tradition extends from Torrigiano, who worked for Henry VII., through Holbein, Van Dyck, and Lely to Tadema.

A true demand for science for manufactures would call in plenty of foreigners if no natives could be found.

We must educate our masters, the owners of manufactories. At present our existing science schools find a difficulty in placing their best pupils.—Yours, etc., R. J. FRISWELL, V.P.I.C.

PRODUCTION OF ZINC IN RUSSIA.

AFTER coal, zinc production occupies the chief place in the rising industry of Poland, and its development is the more rapid because the only mines known in the Empire are situated in the basin of Sosnovice-Dombrowa. Two companies possess the monopoly; that of Sosnovice, which acquired in 1890 the mines and works of Kramst, and that of Derwiz-Szewcow-Pomeraneff, to which, in 1891, the Government farmed, for sixty years, its works in the basin of Dombrowka. The zinc ore workings are exclusively concentrated in the neighbourhood of the town of Olkusz. The ore there found in the largest quantity is calamine, which gives, after smelting, 7 to 30 % of zinc. There is also found, but in a lesser degree, "blende," or native sulphurous zinc. As the upper deposits are becoming exhausted the two companies have undertaken the construction of galleries intended to divert the water and to allow of a search at a greater depth for thicker beds of ore. When extracted the ore is transported, either by waggon, or by the Ivangrod-Dombrowa railway, about twenty-five kiloms. away from the mines to the factories of Bendrin and Pauline. There are only two rolling mills in the kingdom—one at Sosnovice and the other at Slawkow—whose output is in the shape of plates or sheets; whilst there is also a zinc-white factory. On comparison of the results of 1895 with those of the preceding year, an important increase in production is to be noted. During last year 125,634 poods more of calamine were extracted, and 31,539 poods more of zinc were produced than in 1894; while the rolling mills turned out more by 25 892 poods, and the output of zinc-white was higher by 1,100 poods. The figures on which those improvements were registered are given below in poods:—

Product.	1894.	1895.
Calamine extracted.....	3,367,237	3,492,871
Zinc made	274,774	306,113
Output of the rolling mills....	146,337	172,229
Output of zinc-white	41,002	42,102

These works employ 2,100 hands, of whom 1,400 are in the mines and 700 in the factories. Owing to the fall in prices the prospects of the industry are not very favourable, but it is thought that they will improve, as the heavy import duties render competition almost impossible on the part of the Silesian industry.

THE TREATMENT OF MANCHESTER SEWAGE.

AT the last meeting of the Manchester City Council, Mr. Alderman Thompson, chairman of the Rivers Committee, moved the adoption of the proceedings of that Committee. He said that in the long period of 31 years during which he had had a seat in the Council he never rose with a feeling of greater responsibility. While thanking the Council for the forbearance shown towards himself and the Rivers Committee, he said he was not surprised that it should have been thought by some people that the Committee had been rather tardy in making a statement as to the position of the sewage question, but he would ask them to give the Committee the credit of believing that they had acted in the best interests of the community. There was an old saying, "Hasten slowly," and he thought he should be able to show to the Council and the ratepayers that they had not suffered by delay. The area of the city in round figures was 12,000 acres. The area that had been dealt with and in which sewers had been laid was 6,000 acres. The estimated popuplation of the city was 531,000, and it would interest the Council to know that since the census was taken in 1891, or during the last five years, the increase in the population was estimated at 25,000. The population now treated in the sewage scheme was 350,000. The sewage of that population was treated by a system of precipitate by salts of lime, or salts of iron. The sludge was taken out, and the liquid allowed to go into the Ship Canal. It was at that point that the difficulty existed between the Corporation and the Joint Rivers Committee. The Committee now came before the Council on that particular point, and they asked the Council to give their sanction to a scheme which was to a great extent a reversal of the policy which was suggested on a former occasion. The Council would be pleased to know that nearly all the contracts were settled. It was well known that some of the work which had been done was defective, and in one or two cases the proportion of defective work was very large. The investigations which had been made into these matters had resulted in some of the contractors complained of—where it had been shown that the defects were accidental rather than deliberate, and the contractors were not to blame—had been reinstated in their contracts. With regard to one firm of contractors an action at law was pending. With reference to the disposal of the sludge it would be in the memory of many members of the Council that when an inquiry was held in the Town Hall upon the question of the disposal of the sewage, there was a good deal of opposition on the part of the out-townships as to the piling up by the Committee of quantities of sludge which would become a nuisance, and it was said would injure property within a considerable distance of the Committee's works at Davyhulme. They now proposed to convey the sludge straight out to sea.

Previous to the reading of the report of the committee, Sir J. Harwood pointed out that the report had only been considered by the Committee on the preceding day, and it was manifestly inexpedient that a document involving matters of such magnitude and containing such very important suggestions should not be in their hands when the subject was discussed It was important for the good government of the city, and in order the Council might have full information, that the report should not be considered that day. He hoped his esteemed and valued friend Mr. Alderman Thompson, whose services no one appreciated more than he did—(hear, hear)—would see that his suggestion was a kindly one.

Mr. Alderman Thompson said he accepted the suggestion that the matter should be deferred for a week. There was not the slightest desire to hasten the matter or get a snatch vote; the thing was far too serious for that. If there was an appearance of haste, it was simply because their hands had been forced. The Committee hoped the Joint Committee would have given them at least till the end of October before taking action; and the request was brought before Mr. Yates, the stipendiary magistrate, but he would not allow a postponement to that date, though it was intimated to him that many members of the Council and many professional witnesses were taking their holidays. He insisted on the 16th September being fixed, and the Rivers Committee had to act accordingly. He hoped the report would be sent out on the following day. He would briefly refer to three points in it. The first point was how the effluent was to be dealt with. It would have to be dealt with somehow, and the difficulty of the Rivers Committee was that the Mersey and Irwell Joint Committee had set up a very high standard indeed. They acted upon the advice of their chemist, and that could not be upset. That standard could be reached by filtration through land, or by an artificial mode of filtration (though the cost was too great), but it could not be attained by any chemical precipitants known to science. The Rivers committee had taken the advice of an eminent chemist—whose name, for special reasons, he would not mention—and that gentleman had made a report to the Committee, in which he had shown that the Manchester Corporation were trying to do their duty, and had done it so far as they were able. That eminent chemist, however, had noticed that when their effluent, which was satisfactory as far as it went, came in contact with the water of the canal, putrefaction was immediately set up. The three points for consideration in the report were whether they should go in for land filtration pure and simple, whether they should adopt a system of artificial filtration, or whether they should adopt measures for carrying the effluent to a tidal opening. The city surveyor had estimated that to carry out a perfect system of land filtration would require 1,300 acres of land. That would cost more than £500,000 in the first place Then there was the second point, as to whether it should be dealt with by artificial filtration. That would be a costly process. Then came the third suggestion, that of carrying the effluent out to a tidal opening. That scheme was no new one, and had not been brought forward in a moment. In a recent interview, Sir E. Leader Williams had stated that he suggested such a scheme to the late surveyor, though he did not believe it ever came under his (Mr. Alderman Thompson's) notice. All these points would be brought before the Council in the report.

He moved that the proceedings of the Committee be adopted, and that a special meeting of the Council be held on Wednesday the 9 inst.

to consider the report of the Rivers Committee with reference to the disposal of the sewage and the effluent.

The resolution moved by Mr. Ald. Thompson was then adopted.

Note.—The Report of the Manchester City Surveyor is to be made public, and an exhaustive abstract of the scheme will be given in our columns next week.—Ed. *C. T. J.*

Trade Notes.

Death of a German Scientist.—Herr Wickersheimer, the well-know chemist and inventor of the preparation bearing his name for preserving human objects and the carcases of animals for anatomical studies, died last week.

Reduction of Dues at Liverpool.—At a meeting of the Mersey Dock and Harbour Board, on Thursday, it was resolved to take off one shilling per ton of the dues on cotton, practically reducing the dues by one-third. The reduction will make a difference of £35,000. per year in the income of the Dock Board.

One Way of Forestalling a Strike.—The Directors of Howard and Bullough, Limited, Globe Works, Accrington, one of the largest machine shops in the country, have, unsolicited, increased the wages of their workpeople. The advance has been granted to about 2 000 hands, and has given great satisfaction in Accrington.

The People's Palace Technical College.—We have received a copy of the Calendar of this College for the 1896-7 session. There is certainly a well arranged programme of classes covering a great many technical subjects, as well as those ordinarily dealt with. The Calendar can be obtained from the College, London, E., for one penny.

Rochdale Sewage Works.—The members of the Rochdale Town Council visited the sewage works at Roach Mills, Rochdale, on Thursday, to inspect and inaugurate the new precipitating tanks and sludge-pressing plant. The whole of the work has been carried out from plans prepared by Mr. S. S. Platt, the borough surveyor. After Mr. Alderman James Cheetham had performed the opening ceremony, the members retired to Roach Mills House, where luncheon was partaken of.

Manchester Corporation Accounts.—*Gasworks:* The net revenue for the year ended 31st March, 1896, amounted to £39,279. 9s. 5d, as compared with £90,438. 7s. 10d. in the previous year, a decrease in the past year of £51,158 18s. 5d., which is mainly accounted for by reduction during the year in the price of gas, etc. *Electric Lighting:* The net profit for the year ended 31st March, 1896, amounted to £11,138. 10s, as compared with £5,709. 7s 6d foa the previous year, being an increase of £5,429. 2s. 6d. *Waterworks Department:* The net revenue for the year ended 31st March, 1896, was £10,161. 10s 4d, as compared with £17,004. 19s 8d. in the previous year, being a decrease of £6,843 9s. 4d. *Manchester Ship Canal:* The loan to the Ship Canal Company remains at £5,000,000, as at March, 1895. The sum of £56,250. has been received from the company for interest during the year, leaving £225,000. interest accrued, but not received at 31st March, 1896. This amount appears in the balance sheet as an asset.

An Exemplary River Pollution Prosecution.—An action was recently brought in the County Court of Andover by Mr. William Fowle and others, riparian and millowners, as aggrieved persons under the River Pollution Act, 1876, against the Andover Town Council, for an order requiring the town council to abstain from causing or knowingly permitting sewage matter to fall or flow or to be carried into the river Anton along any channels or drains under the town council's control in, at, or about the borough of Andover. This was one of the rare cases where private individuals have taken action under the Act. The case was heard before his Honour Judge Gye on the 10th, 24th, and 25th of July, and the Judge reserved judgment. On August 21st the Judge gave judgment, the effect of which was that he held that the plaintiffs were persons aggrieved within the meaning of the Act, and that they have the ordinary right of riparian owners to have the flow of the stream come to them unpolluted; that the Andover Town Council had knowingly permitted the sewage to fall into the stream; that there is serious pollution of the river, and that the council had not used any means of rendering harmless the sewage so falling into the stream; and that they are able to prevent the sewage flowing into the stream; and the Judge stated that he had seen the river himself and had no hesitation in saying that the state of the river was very bad, and he granted an order requiring the corporation to abstain from polluting the stream, suspending the operation of the order until October 31, with liberty to either party to apply on October 23, when he would exercise his discretion as to whether he would further suspend the order or not, as to which he would be guided by his seeing if any operations or negotiations were on foot to remedy the evil. The Judge gave the plaintiffs costs on the higher scale, and the costs of the shorthand notes and of expert evidence.

Oldham Wakes.—All the mills in Oldham have been closed for the whole of this week for the Wakes holidays. It is computed that over 60,000 workpeople left the town on Saturday morning last for the various pleasure resorts, and so systematically was the traffic worked that not a single accident was reported. No less a sum than £135,000. has been distributed by the "going-off" clubs, against £36,000. in 1886. If the particulars of every club in the borough could have been got this year the sum distributed would have been found to be not far short of £200,000.

Resin.—In their monthly resin circular Messrs. F. and S. Chiesman and Co., of London and Liverpool, report a slight advance in common and E. F. G. descriptions for shipment, all other grades remaining about the same as a month ago. This year, it appears, the prices are not being brought down by cheap steamer rates, and, as the demand is good, higher rather than lower prices are predicted for the next few months. The Savannah producers are expected to agree to curtail the production next season; but the agreement may break down in actual operation, as in 1894. In London there has been a good trade for forward deliveries, with rather firmer prices for supplies on the "spot;" the commoner grades are becoming scarce. The expected fall of prices during the past month has not taken place, and higher prices are now looked for, as an advance on August quotations is usual in the later months. The stock at the public wharves was 9,613 barrels on July 31, as against 12,165 barrels at the corresponding time last year. A better tone all round as regards low grades is reported from Liverpool, but "pales" have continued weak, and there seems at present little prospect of an advance.

Smoke, Oil, and "Gas."—A leading evening paper says:—"It is being stated on high medical authority that the introduction of the slot-meter for gas-stoves in the East End of London is already responsible for an enormous diminution in the volume of the smoke-pall of this city. Experts have declared that London smoke has been definitely observed after a high north-east wind as far away as Torbay, and it is believed that individual smoke-particles often remain in the Metropolitan atmosphere for weeks together before being ultimately driven away. It would seem to be a reasonable inference from this circumstance that the greater prevalence of gas and oil engines in the great industrial centres of the North of England will in the near future result in a sensible decrease of the black cloud which also hangs upon them. The institution of civil engineers are devoting no little attention to this problem of smoke diminution, and the similar authorities in France have offered rewards for effective contributions to the literature of the subject. Attempts have been made to secure the aid of the Government in a movement for placing legislative restrictions upon the smoke output of factory chimneys, but without avail. All parties concerned are waiting for a new method of treatment." Next, please!

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are very firm, and prices have jumped still higher; 90's figure at 4s. 6d. prompt; October-December, 4s. 3d.; January-June, 3s. 10½d. 50/90's prompt, 3s. 1d.; forward, 3s. and 2s. 10½d. respectively. Carbolic acids are rather quiet, particularly crystals (40%), which are down a farthing, to 6¼d.; crude 60% still figures at 2s. 2d. Solvent naphtha is steady at 1s. 6d., while crude is quoted higher in sympathy with benzols, the nearest prices being 1s 3d. to 1s 4d. Pitch lower at 31s. to 32s. f.o.b., East Coast.

Sulphate of ammonia has quietened down again, chiefly owing to dealers having come off the market. Values, so far, however, remain unaltered with London outside makes at £7. 16s. 3d., Liverpool £7. 15s, Hull £7. 12s. 6d., and Leith £7. 11s. 3d. Forward Beckton £8.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is quiet, and there is little doing. The tone of the market is steady. Olive is firmer both in position and prices, which range from £30. 10s. to £36. per tun. Linseed is quiet, Liverpool makes being quoted 17s. 3d. to 19s. per cwt. in export casks. Cottonseed shows very little alteration: Liverpool refined is quoted 15s. 6d. to 16s., and American, 16s. to 16s. 6d. per cwt. Japanese fish oils have been selling at 14s. per cwt. Castor oil is steady on spot, at 3d. for good seconds Calcutta, and 3⅝d. to 3¾d. ex store. First pressure French, 2⅝d ex-quay, and 2 7/16d. to 2⅝d. per lb. ex-store. Tallow is firm, with a better inquiry. North American is quoted 17s. 6d. to 18s. 3d. per cwt., according to quality. Resin steady in price, but shows signs of weakness in the higher grades, as the demand is flagging. Spirits of turpentine are well inquired for, at 19s. 3d. per cwt., spot. Petroleum steady to firm: American, 6¾d. to 7½d., according to quality, and Russian refined 5½d. per gallon.

LOURS.—Prices are steady, and practically without change, s: Oxfordshire, common, £10., medium, £12., be shire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. ead unchanged. Venetian red, £6. to £10. Cobalt: Pre- oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, nedium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

MISCELLANEOUS CHEMICAL MARKET.

iness in the alkali trade continues steady, and prices of all the ts remain without change. Ammonia alkali, 58%, £3. 7s. 6d., .o.r., and for export £3. 5s. to £3. 10s. f.o b. Caustic soda, or prompt and forward delivery, is stationary, and nearest values are :—f.o.b. Liverpool, 77%, £9. 5s.; 74%, £8. 5s.; 70%, £7. .; 60%, £6. 7s. 6d. per ton, 10-ton lots and upwards. In ing powder there is rather more activity, both for prompt and d business at £6. 10s. f.o.r. makers' works for home trade, and s to £6. 15s. f.o.b according to market. Chlorate of potash a n easier. Chlorate of soda 5¾d. per lb. Sulphate of copper at £16. 5s. f.o.b. Sulphur firm at £4. 10s. f.o.r. Saltcake, 22s. in bulk. In acetates of lime, brown and grey, there is no in quotations to report, but rather a firmer tendency. Other s quiet and unchanged. White powdered arsenic in good d at £22. 5s. to £22. 10s.] f.o.r. Potash, caustic and car- , selling freely, and prices are firmly maintained. Yellow prus- f potash quiet at 6¼d. to 6½d. per lb. Muriate of ammonia lower at £21. to £21. 10s Other ammonia salts are steady. e of soda keeps an even value at 7s. 10½d. for prompt and for- Carbolic acid crystals and other qualities are only in moderate t, and no changes in value are recorded. Generally, the trade micals continues quiet in all manufacturing districts, and espe- in the miscellaneous goods for the textile trades.

REPORT ON MANURE MATERIAL.

re is still a languid tone about the market, in which there is no eature this week, and business is very circumscribed. The ion for 75/80% Florida phosphate is still 6d per unit, but no transaction is known. While there exists the uncertainty as to ure of the freight market, sellers are not in the meantime likely e their prices. South Carolina River rock is a shade firmer, thing less than 5d. per unit would now find acceptance. For tal quality 58/63% Algerian the quotation is still 5d. per unit, a premium would be required for late shipment; for higher 5½d. is asked.

River Plate bones some business has been done, but particulars reported. For autumn shipment price asked is £3. 15s, but remain indifferent, probably on account of the very moderate at which East Indian bone meal can be bought. For shipment, crushed Kurrachee bones may be had at £3. 12s. 6d. per ton, me price would be accepted for ordinary quality Bombay bone

ate of soda is quiet but steady. Quotation on spot is 8s per cwt. of cargoes arrived at port of call or near at hand is 7s. 9d. to . per cwt. There is nothing special to report in miscellaneous al.

THE METAL MARKETS.

NDON, WEDNESDAY.—Pig iron, firm: Scotch warrants closed at d.; Middlesbrough, 37s. 9½d. cash, and hematite, 47s. 4½d. t, firm: Chili bars, G. O. B.'s and G. M. B's., closed at 1s. 3d. to £47. 16s. 3d. cash, and £47. 11s. 3d. to £47. 16s. 3d. months. Tin, steady: Straits closed at £59. 5s. to £5). sh, and £59. 16s. 3d. to £60. 6s. 3d. three months; Australian, s. to £60. 10s English ingots, £63. 5s. to £63. 10s. Lead: h, £10. 17s 6d. to £10. 18s. 9d.; English, £11. 2s. 6d. Silesian , ordinary, £17. 5s. Nickel, 1s. 2½d. Antimony, £29. 5s. ilver: First hands, £6. 10s.; second hands, £6. 9s. *shares*, steady: Cape, 2⅜ to 2½; Copiapo, 2⅜ to 2½; , 2¼ to 2½; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, $23\frac{13}{16}$; Tharsis, 5⅜ to 5⅝.

ASGOW, WEDNESDAY.—Market firmer, with moderate is. Scotch done at 46s. 3½d. cash, also at 46s. 5d. and ½d. one month; closing with buyers at 46s. 3d. cash, sellers s. 3½d. Cleveland closes with buyers at 37s. 9½d. cash, ask 37s. 10d. Cumberland hematite done at 47s. 5d. cash; with buyers at 47s. 4½d. cash, sellers ask 47s. 5d. esbrough hematite closes with buyers at 44s. 11½d. cash, sellers s. 0¾d.

TYNE CHEMICAL REPORT.

TUESDAY.

In chemicals there is rather a better demand, and shipments are being made more freely, though business is not what it should be at this time of the year. Soda crystals are quoted £2. 2s 6d. per ton, gross weight, locally. Caustic 76/77% £9., and 70% £7. 10s. to £7. 15s. per ton. Sulphur £4. 15s. per ton, f.o.b. Tyne. Other products as under :—

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposuiphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3 7s. 6d. per ton, nett; soda crystals, casks, £2 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—No change in South Durham salt, which is quoted at 9s 6d. per ton, f.o.b. Tees.

COALS are fairly steady. Gas coa's are increasing in consumption week by week, and price is steady at 6s. 6d. to 6s. 9d. per ton. Coke is still in excellent demand both for export and home use, and price is maintained at 15s. and 15s. 6d. per ton. Prices to-day:—Best Northumbrian steam, 8s. 3d. to 8s. 4½d. per ton; second qualities, 7s. 3d. to 7s. 6d. per ton. Small steam 3s. 3d. to 3s. 6d. per ton. Gas coals 6s 6d. to 7s. per ton. Household coals 10s. to 11s. per ton. Coke 15s. to 16s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The tendency of prices generally is to harden, with a fairly steady demand. The imports during the week have been: Linseed 14,943 quarters, viz., from St Petersburg, 10,420 quarters; Riga, 2,363 quarters; Archangel, 2,186 quarters; and Harlingen, 74 quarters. Linseed oil quiet, sellers 15s. 1½d., naked, spot; September-December, 15s. 3d.; or January-April offer at and May-August at 16s. 1½d.; boiled and refined £1. to £2. per ton extra. Export for the week has been 3,200 cwts. The import of cottonseed has been for the week 4,254 tons, from Alexandria. Refined cotton oil has improved about 5s. per ton, closing steady at 13s. 7½d., naked, spot; September-October, 13s. 9d., buyers; and November-April, 13s. 10½d., buyers; casks 17s. 6d. and ordinary barrels £1. 10s. per ton extra. Export of refined oil for the week has been 3,800 cwts Castor oil scarce at 2¾d. per lb. upwards. Olive oil has a firmer tendency and is quoted £29. 10s. per tun. Turpentine 19s 6d to 20s. per cwt. Cod oil £17. to £20. per ton. Belgian oleine £18. to £21. per ton. Olive oil soap (Italian), 60%, £18. per ton. Brown Yorkshire grease £8. to £9 per ton, according to quality. Herring oil £13. Boiled siccative oil £10. 10s. per ton.

CAKES.—In slightly better nemand. Linseed cakes quiet: 95% pure, £5. 15s; Americans £4 17s. 6d.; Russians £5. 5s. to £5. 10s. Oil cakes £4. 12s. 6d.; Cotton cakes in fair demand; best makes, £4. per ton, spot; December-April, £3. 10s. Rape cakes unchanged.

PAINTS.—Business shows some abatement, still manufacturers keep fairly well employed. Prices are: Dry mineral colours from £3. to £7. 10s. Barytes 40s. to 60s. per ton in bags. White and red leads unchanged. Ready-mixed paints, in lever tins, from 24s. Paint remover 25s to 30s. per cwt. Black, blue, green, and yellow ochre paints from £11. per ton. Imperial black varnish £5. 10s. per ton, in barrels. Oak varnish 5s. 6d. per gallon.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The paraffin oil and solid paraffin markets (candles included) are greatly unsettled owing to too well-founded reports of breaches of agreement amongst the home producers, accompanied by a more active rivalry on the part of the vendors of foreign oils. The figures given below for burning oil and for solid paraffins are those of the agreement, but selling is being done under these figures, by some of the makers.

at least. Some of them hold out for the agreement figures, but may ultimately have to go on the principle of getting what they can. Lubricants and paraffin spirit are pretty steady. Sulphate of ammonia shows no signs of mending. The top prompt price at the time of writing is £7. 11s. 3d., but some of the weaker holders are taking less General chemicals hold to quietness, with, if anything, a leaning to easier quotations. Sulphate of copper has dropped another fraction, and both chlorate of potash and caustic soda are reported as the least bit easier. Sulphur remains the exception, being scarce. Price is now £4. 15s., Tyne.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 7s. 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 21s.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 1½d.; sulphate of ammonia, £7. 10s. to £7. 11s. 3d. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 5s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2½d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £4. 15s., 885° £5 to £6., and 890/895° £6. to £6. 10s. Week's imports of sug Greenock were 5,626 bags beet unrefined, and 500 bags beet ref

New Companies.

Robinson Bros (Marple), Ltd – CAPITAL, £5,000., in £1. s This company has been formed to acquire the business of tanne curriers now carried on by Robinson Bros at Marple, Cheshire.

Canaigre Syndicate, Ltd.—CAPITAL, £10,000., in £1 s This company has been formed to carry on the business of importe dealers in canaigre and other tanning materials. The subscribers memorandum of association are:—F. W. Freir, 9, Victoria S.W., agent; W. A Chadwick, North Side, Clapham Co solicitor; A. H Harrison, St. Mary's-road, Peckham, agen Reader, 7, Ely-place, E.C., solicitor; T. W. Rossiter, 7, Ely- E.C., solicitor; G. Borner, St. Neots, Hunts., engineer; T. C Dunstable, Beds, chemist.

Textile Cleaning Co., Ltd.—CAPITAL, £20,000., in shares each. This company has been formed to enter into an agreemen F. N Turney and to turn to account certain inventions for degr scouring, and cleaning wool. The subscribers to the memoran association are:—J. Turney, Trent Bridge, Nottingham, dresser; R. L. Matthews, Stourbridge, Worcester, leather dress W. R. Ward, Weston-street, Bermondsey, leather dresser; J. Elm Bank, Nottingham, engineer; S. Bourne, Pilcher-gate, N ham, cotton doubler; J. B. Alliott, The Park, Nottingham, eng W. H. Thorpe, Barker-gate, Nottingham, lace manufacturer.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 22nd.

Acetate of Lime—
U. States, 1,149 bgs. — R. E. Drummond & Co.

Acetic Acid—
Holland, 11 pks. — Little & Johnston
" 20 — H. Wallace & Co.
" 50 — A. & M. Zimmermann

Alkali—
France, 100 c. — J. Harrison

Alumina Sulphate—
Holland, 30 cks. — H. Wallace & Co.

Antimony Ore—
Sydney, 21 t. — Rivers & Co.

Arachide Oil—
Holland, 5 cks. — Beresford & Co.

Asbestos—
Germany, £30 — Craven & Co.
Canada, 1,000 — Soundy & Sons
Italy, 840 — W. Byford
Canada, 945 — "
France, 12 — Girard Frs. & Co.

Barytes—
Belgium, 59 cks. — O'Hara & Hoar
Holland, 100 bgs. — J. Owen
Belgium, 33 brls. — J. L. Lyon & Co.
" 4 — W. Harrison & Co.

Bleaching Soda—
Germany, 100 cs. — H. Lambert

Bone Meal—
E. Indies, 375 t. — A. Hunter & Co.

Boracic Acid—
Germany, 6 pks. — A. & M. Zimmermann
" 6 — T. H. Lee
" 10 — F. Boehm

Camphor—
France, 8 cs. — Union L. Co., Ld.
Germany, 100 — Lewis & Peat
" 58 — Brown & Elmslie
" 3 — T. H. Lee

Caoutchouc—
Zanzibar, 210 c. — L. & I. D. Jt. Co.
E. Indies, 5 — Prop. Bull Wf.
U. States, 1 — L. & I. D. Jt. Co.
E. Indies, 14 — Ralli Brs.
France, 27 — Prop. Bull Wf.
" 3 — Brookes & Green
Rangoon, 110 — Vokins & Co.
Thursday Is., 9 — Mc Ilwraith & Co.
E. Indies, 53 — Ross & Deering
Penang, 240 — L. & I. D. Jt. Co.
" 24 — Prop. Bull Wf.
U. States, 40 — Stiebel Brs.
Rangoon, 53 — A. Howden & Co.
" 359 — L. & I. D. Jt. Co.
U. S. (Col.), 21 — Prop. Bull Wf.
Italy, 20 — Chautard & Christensen
Belgium, 6 — Stobbs, Wilson & Co.

Carbonic Acid—
Holland, 25 pks. — J. G. Back
" 95 — J. Owen

Castor Oil—
Belgium, 30 brls. — Burrell & Co.
" 10 — Sawer Sons & Co.
France, 20 — Lucas & Spencer's Wf. Ld.
Belgium, 21 — Anderson, Weber & Co.

Caustic Potash—
France, 40 drs. — Phillipps & Graves

Chemicals *(otherwise undes.)*—
Belgium, £215 — Société John Cockerill
" 42 — T. H. Lee
France, 3 — "
" 47 — Flageollet & Co.
Germany, 69 — T. H. Lee
France, 80 — A. Carey
Germany, 48 — L. & I. D. Jt. Co.
U. States, 1,335 — C. Swallow
Germany, 35 — R. W. Harris
" 100 — Phillipps & Graves
Portugal, 4 — Coverley & Westray
Holland, 20 — Phillipps & Graves
Germany, 976 — A. & M. Zimmermann
Holland, 279 — T. H. Lee

Copperas—
Holland, 10 cks. — A. & M. Zimmermann

Cream of Tartar—
France, 9 cks. — B. & F. Wf. Co.
Spain, 5 — "
Italy, 46 — B. Jacob & Sons
Spain, 1 — A. Owen
France, 5 — W. C. Bacon & Co.
" 2 pks. — L. & N. W. Ry. Co.

Dextrine—
Germany, 100 bgs. — Vokins & Co.

Dyestuffs—
Argols
Italy, 100 bgs. — Thames S. T. & L. Co.

Cochineal
Canaries, 19 bgs. — G. S. Bruce & Co.
" 6 — Lewis & Peat
" 5 — J. W. Borland
" 2 — Sperling & Williams
" 10 — L. & I. D. Jt. Co

Cutch
Rangoon, 318 cs. — Dalton & Young
" 150 bxs. — Vokins & Co.
" 100 — Brown & Elmslie
" 582 — A. Howden & Co.
" 100 — Lewis & Peat
" 50 — A. B. Curtis & Co.
Burmah, 102 — W. Balchin & Co.

Divi Divi
E. Indies, 194 bgs. — Walker, Munsie & Co.

Extracts
France, 160 cks. — L. J. Lævinstein & Co.
" 50 — B. & F. Wf. Co.
Denmark, 2 cs. — Sorensen & Co.
U. States, 25 — Fisher, King & Co.
" 25 brls. — F. Claydon & Co.

Gambier
Singapore, 321 bls. — L. & I. D. Jt. Co.
" 150 — Huttenbach & Co.

Indigo
E. Indies, 14 chts. — P. Macfadyen & Co.
" 1 — Parsons & Keith
Germany, 5 cs. — T. H. Lee
E. Indies, 44 chts. — Wallace Brs.
" 5 cs. — Wrightson & Son

Manjak
B. W. I., 8 bgs. — Scrutton Sons & Co.

Myrabolams
E. Indies, 1,000 pks. — P. & O. Co.

Shumac
Italy, 25 bgs. — Pickford & Co.

Tanners' Bark
Natal, 12 t. — Boutcher, Mortimore & Co.
" 80 — A. J. Humphery
" 56 — A. & W. Nesbitt
Germany, 100 — Baxter & Hoare

Dyestuffs *(otherwise unascribed)*
France, 100 bls. — Union Ltge Co.

Farina—
Germany, 100 bgs. — Seaward Brs.
Holland, 100 — J. Barber & Co

Glucose—
Germany, 40 pks. 392 c. — Bennett S. S. Co.
" 400 — 400 c. — J. Frank & Co
U. States, 500 — 500 — Barrett, Tagant & Co.
" 1,000 — 1,000 — Robinson, Sons & Co.
" 2,500 — 2,500 — Pearce, Pelly & Co.
Germany, 41 — 335 — J. Knill & Co.
" 6 — 12 — J. Barber & Co.
U. States, 2,000 — 2,000 — G
" 350 — 2,313 — E. & T
" 400 — — J
Morton
" 400 — 400 — Kay
P
" 25 — 44 — H. J
" 1,000 — 1,000 — Gill
" 2 — 10 — N. S.
" 1,250 — 1,230 — F
Morton
400 — 400 — L. &
B
500 — 500 — Unio
350 — 350 — C. S.
France, 100 — 200 — W. I
Germany, 25 — 200 — Dre
Ka
U. States, 50 — 285
" 975 — 3,350 — Bellamy
" 405 — 2,417 — J
schlag
" 4,353 — 6,320 — R. C
Germany, 28 — 194 — M. J

Glue—
France, £7 — Flageollet
" 34 — Mess Paul
Belgium, 30 — Societ
C
France, 57 — Vokins
U. States, 38 — L. F.
Belgium, 45 — Sawer, Sons
" 30 — C. J. Capes
Holland, 25 — G. Rabo
Germany, 45 — Phillipps & C
" 70 — Craven
" 25 — L. & I. D. J
" 185 — Elkan
France, 50 — B. & F. W

Gypsum—
France, 270 t. — Francis & Co.

Lamp Black—
U. States, 60 brls. — J. M
" 378 brls. — H. Wi
" 100 — H. H
" 100 — M Ashley

Litharge—
Holland, 14 cks. — J. Barber
" 47 — Spies Brs.
Germany, 7 — D. Stowe &

Manure—
U. States, 130 t. A. Hunter & Co.
Belgium, 50 Chemical Works
Mica—
Calcutta, £280 W. M. Smith & Sons
Madras, 80 ,,
Minium—
Holland, 12 cks. J. Barber & Co.
Molasses—
U. States, 310 cks. 1,845 c. R. G Hall & Co.
,, 750 905 Vokins & Co., Ltd
Ochre—
France, 10 cks. J. L. Lyon & Co.
,, 10 brls. Beck & Pollitzer
Holland, 35 pks. Phillipps & Graves
France, 170 T. Cartwright
U. States, 120 Williams, Torrey, & Co.
Permanganate—
Germany, 13 cks. T. H. Lee
Pitch—
France, 70 brls. C. S. Lovell
Plumbago—
Ceylon, 100 cks. G. R. Hatler
,, 75 J. Atkinson
,, 100 L. & I. D. Jt. Co.
,, 40 J. Thredder, Son, & Co
Potash—
Canada, 11 brls. Charles & Fox
France, 46 drs. Carey & Sons
Potassium Carbonate—
France, 80 c. Petri Brs.
,, 90 W. E. Cole
Potassium Oxymuriate—
Sweden, 22 kgs. G. Boor & Co.
Pumice Stone—
Italy, 5 t. W. J. Davies & Sons
,, 9 Acton & Borman
,, 13 O'Hara & Hoar
,, 1 T. Cartwright
Pyrites—
Bossmac, 7,000 t. Walker, Howard, & Co.
Rosin—
U. States, 1,000 brls. F. & S. Chiesman & Co.
,, 2,000 J. Knight & Sons
,, 850 Perkins & Homer
,, 1,514 T. Nickels & Co.
Germany, 26 L. & I. D. Jt. Co.
Salicylic Acid—
Germany, 11 pks. T. H. Lee
Saltpetre—
Germany, 90 cks. P. Hecker & Co.
,, 30 L. & I. D. Jt. Co.
Silica—
Germany, £50 A. Haacke & Co.
Soda—
Holland, 2,000 c. R. Waters
Belgium, 4,400 ,,
,, 215 F. Claydon & Co.
Sodium Acetate—
France, 15 cks. H. Lorenz
Sodium Hyposulphite—
Germany, 372 kgs. F. Boehm
,, 20 c. A. & M. Zimmermann
Sodium Prussiate—
Belgium, 37 brls. D. C. Thomas & Sons
,, 32 Perkins & Homer
Starch—
Germany, 400 cs. L. Sutro & Co.
,, 200 Seaward Brs.
Holland, 90 Hernu, Peron, & Co.
U. States, 500 pks. 50 bgs. Seaward Brs.
Germany, 166 J. Hall, jun., & Co.
,, 300 cs. C. Tennant, Sons, & Co.
Belgium, 296 F. Claydon & Co.
,, 20 Hore & Scrivener
Belgium, 50 Leach & Co.
,, 80 Taylor Brs.
Holland, 355 T. H. Lee
France, 40 B. & F. Wf. Co.
Germany, 700 Horne & Co.
,, 8 Phillipps & Graves
Holland, 95 ,,
,, 628 Little & Johnston
Belgium, 50 T. H. Lee
,, 200 E. & T. Pink
Stearine—
U. States, 3 cs. Williams, Torrey & Co.
France, 100 sks. J. Goddard & Co.
U. States, 25 cks. C. S. Lovell
France, 8 Mory & Co.
,, 100 Bennett S. S. Co.
,, 80 H. Walbaum & Tosetti
Belgium, 63 bgs. H. Hill & Sons
Sulphur—
Italy, 20 t. J. Greig
,, 76 G. Boor & Co.
Talc—
France, £40 G. G. Blackwell, Sons, & Co.
,, 32 Brasch & Rothenstein
Tar—
Germany, 7 brls. J. T. Davis
Tar Oil—
Germany, 1 brl. T. H. Lee
Tartaric Acid—
Holland, 4 pks City Coml. Wf.
,, 4 Kirkpatrick & Co.
Ultramarine—
Germany, 48 cks. T. Hamilton
Holland, 7 pks. Hernu, Peron, & Co.
,, 4 Phillipps & Graves
Belgium, 2 brls. W. Harrison & Co.
Varnish—
U. States, 10 pks. Elkan & Co.
,, 6 Dawson Brs.
Verdigris—
France, 7 cks. B. & F. Wf Co
Waste Salt—
Germany, 450 bgs. Ekman Pulp & Paper Co.
White Lead—
Holland, 48 cks. T. & W. Farmiloe
,, 26 Blundell, Spence, & Co.
,, 20 E. J. Diggins
Belgium, 30 J. L. Lyon & Co.
Holland, 20 Burtell & Co.
,, 20 A. & M. Zimmermann
Germany, 65 F. G. Clifford
,, 11 H. Lambert
Belgium, 121 brls. Leach & Co.
Germany, 63 D. Storer & Sons
Belgium, 20 Perkins & Homer
Wood Pulp—
Norway, 5 pks. M. D Co.
Holland, 482 Moreton Cox Brs.
Germany, 406 W. Friedlander
,, 245 O. Herrlich
Sweden, 800 Hummel & Co.
Norway, 292 W. G. Taylor & Co.
Germany, 66 Thames S. T. & L. Co.
Holland, 3,080 Henderson, Craig, & Co.
Sweden, 200 Johnsen & Jorgensen
Sweden, 2,119 E. J. & W Goldsmith
Norway, 3 275 Moreton Cox Brs.
Belgium, 1,164 E. J. & W. Goldsmith
Z nc Oxide—
Holland, 125 cks. Spies Brs. & Co.
U. States, 100 brls. M. Ashby, Ltd.
Zinc Sulphate—
Sweden, 20 cs. M. D. Co.

LIVERPOOL.

Week ending August 20th.

Barytes—
Antwerp, 21 cks. 50 bgs.
Bone Ash—
Larate, 583 bgs. J. Nelson & Sons Ld.
Boracic Acid—
Leghorn, 50 cks.
Borate of Lime—
New York, 3,782 bgs. Balfour Williamson
Borax—
Almeria, 13 brls. R. Bulnes & Co.
Caustic Potash—
Hamburg, 36 cs.
Ceresine—
Stettin, 80 bgs. W. Campbell & Co.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck.
Citric Acid—
Messina, 28 cks.
Cobalt—
Rouen, 2 cks. R. J. Francis & Co.
Colours—
Stettin, 35 cks
Rotterdam, 4
Antwerp, 1
Cottonseed Oil—
New York, 25 brls.
Cream of Tartar—
Tarragona, 5 pps.
Dyestuffs—
Cochineal
Gd. Canary, 10 bgs. Burrell & Co.
Cutch
Rotterdam, 10 bxs.
Extracts
Hamburg, 106 cks. 8 bxs.
Fustic
Tampico, 9,153 ps. W. H. Thompson & Co.
Kingston, qty.
Tampico, 4,552 p s. Gruning & Co.
Vera Cruz, 2,625 Ledward Bibby & Co.
Gambier
Singapore, 1,625 bgs. 3,389 bls.
Logwood
Kingston, qty.
Orchella
Lisbon, 30 bgs. Edwards Brs.
Shumac
Palermo, 300 bgs.
Valonia
Havre, 16 sks. Cunard S. S. Co., Ld.
Glucose—
New York, 200 brls.
Hamburg, 45 cks.
Glue—
Genoa, 21 brls
Rouen, 9 cks. 46 cs.
Hamburg, 100 bgs.
Limestone—
Antwerp, 7 cs. J. T. Fletcher & Co.
Manganese—
Hamburg, 10 cks.
Manganese Ore—
Poti, 2,490 t. Forwood Brs.
,, 380 Everitt & Co.
,, 2,400
Minium—
Rotterdam, 71 cks.
Naphtha—
Antwerp, 2 cks.
Ochre—
Rouen, 45 cks. R. J. Francis & Co.
,, 21
Bordeaux, 20
Paint—
Teneriffe, 1 kg.
Philadelphia, 3 bxs.
Boston, 50 cs. M. Nicol & Co
,, 1 bdl. W. Benson
,, 3 brls. Musson & Co.
Amsterdam, 10 brls.
Paraffin Scale—
Baltimore, 200 brls.
Pitch—
Hamburg, 3 brls.
Potash—
Rouen, 3 cks.
Dunkirk, 23 dms. 6 brls. J. Mathews & Co.
,, 43
Hamburg, 10 cks.
Potassium Carbonate—
Stettin, 19 cks. Sachse & Klemm
Pumice Stone—
Messina, 1 cs. 30 brls
Rotterdam, 6
Pyrites—
Huelva, 1,446 t. Matheson & Co.
,, 2,067 Societe des Mines Tinto et Sta Rosa
Rosin—
Savannah, 9 000 b.ls.
Baltimore, 600
Boston, 301
Salt—
Teneriffe, 996 bgs.
Saltpetre—
Hamburg, 30 kgs.
Soap—
New York, 250 brls.
Leghorn, 250 bxs. Weaver & Stany
Boston, 8 cs. W. Foggott
Soapstone—
Bordeaux, 1,000 bgs. G. G. Blackwell, Sons & Co.
Starch—
New York, 400 bgs.
Rotterdam, 80 cs.
Antwerp, 292 J. T. Fletcher & Co.
Stearine—
Baltimore, 25 tcs.
Tallow—
New York, 26 hds.
Boston, 91 tcs.
Zarate, 167 pps. J. Nelson & Sons Ld.
Baltimore, 120 tcs.
Tartar—
Bordeaux, 23 cks.
Hamburg, 18
Treacle—
Philadelphia, 1,630 brls.
N. Orleans, 1,541
Waste Salt—
Hamburg, 1,100 bgs.
White Lead—
Rotterdam, 35 cks.
Wood Pulp—
Gefle, 4,257 bls. H. Tyrer & Co.
Boston, 195
Oporto, 1,000 Caima Wood Pulp Co.
Zinc Oxide—
New York, 100 brls.
Antwerp, 110
Zinc White—
Stettin, 50 cks. M. Ashby, Ltd.
Rotterdam, 100

MANCHESTER.

Week ending August 22nd.

Acetate of Lime –
New York, 2,882 bgs.
Albumen—
Rotterdam, 1 cs.
Alizarine—
Rotterdam, 52 cks.
Aniline Salts—
Rotterdam, 5 cks.
Antimony Salt—
Hamburg, 4 cks.
Barium Chloride—
Hamburg, 1 ck.
Barytes—
Antwerp, 100 bgs.
Camphor—
Hamburg, 5 cs. 1 brl.
Caustic Potash—
Hamburg, 51 cks.
Chemicals *(otherwise undescribed)*
New York, 20 cks.
Chrome Alum—
Hamburg, 3 cks.
Colours—
Boulogne, 5 cks.
Paris, 16 1 cs.
Antwerp, 4 J. T. Fletcher & Co.
,, 5
Rotterdam, 9 bxs. 22 17 83 brls.
Hamburg, 12
Cream of Tartar—
Rotterdam, 18 cks.
Farina—
Hamburg, 120 bgs.
Rotterdam, 335
Stettin, 1,000 Stott, Coker, & Co.
Glucose—
New York, 250 brls.
Glue—
Rotterdam, 30 bgs.
Treport, 10 cks.
Hamburg, 79 bgs.
Antwerp, 3 cks.
Lead Acetate—
Hamburg, 24 cks.
Limestone—
Antwerp, 2 crts. 2 cs.
Manganese Chloride—
Hamburg, 2 cks.
Nickel Sulphate—
Hamburg, 1 ck.
Ochre—
Treport, 40 brls.
Potash—
Treport, 159 cks. 42 dms.

Potassium Carbonate—
Stettin, 36 cks. Stott, Coker, & Co.

Potassium Chloride—
Hamburg, 20 dms.

Potassium Permanganate—
Hamburg, 2 cks.

Potassium Sulphate—
Rotterdam, 100 cks.

Pyrites—
Huelva, 1,380 t.

Salt—
Hamburg, qty.

Soap—
Rotterdam, 2 cs.

Sodium Nitrate—
Rotterdam, 15 cks.

Starch—
Rotterdam, 140 cs.
New York, 800 sks.
Hamburg, 140 cs.
Antwerp, 299

Stearine—
Rotterdam, 13 bls.
New York, 50 hds.

Tallow—
New York, 151 tcs. 150 hds. Co-op. W'sale Society, Ld.

Tartar—
Hamburg, 8 cks.

Waste Salt—
Hamburg, qty.

HULL.

Week ending August 22nd.

Alizarine—
Rotterdam, 9 brls. 8 pks. W. & C. L. Ringrose

Alkali—
Amsterdam, 2 cks. Hutchinson & Son

Antimony—
Dunkirk, 2 cks. Wilson, Sons, & Co., Ld.

Barytes—
Riga, 25 cks. Wilson, Sons, & Co., Ld.
Rotterdam, 22 W. & C. L. Ringrose
Amsterdam, 24 50 bgs. Hutchinson & Son
Antwerp, 20 Bailey & Leetham

Chemicals *(otherwise undescribed)*
Bremen, 1 ck. Veltmann & Co.
Stettin, 26 Wilson, Sons, & Co., Ld
Dunkirk, 28 pks. ,,

China Clay—
Hamburg, 97 cks. Wilson, Sons, & Co., Ld.

Cod Oil—
Aalesund, 107 brls. Wilson, Sons, & Co., Ld.
Bergen, 7 ,,
Hamburg, 3 ,,

Colours—
Rotterdam, 12 bxs. W. & C. L. Ringrose
59 pks.
Bremen, 2 cks. Veltmann & Co.
Hamburg, 8 Wilson, Sons, & Co. Ld.
Antwerp, 15 15 pks ,,
Rotterdam, 10 1 cs. ,,

Cryolite—
Copenhagen, 2 cks. Wilson, Sons, & Co., Ld.

Farina—
Harlingen, 50 bgs. W. & C. L. Ringrose
Stettin, 400 Wilson, Sons, & Co., Ld.

Glucose—
Stettin, 200 bgs. Wilson, Sons, & Co., Ld.

Glue—
Christiansund, 9 brls. Wilson, Sons, & Co., Ld.
Antwerp, 8 Bailey & Leetham
,, 5 pks Wilson, Sons, & Co., Ld
Stettin, 18 cks. ,,
Rouen, 8 40 bls. Rawson & Robinson

Lead Acetate—
Hamburg, 2 cks. Wilson, Sons, & Co., Ld.

Magnesia—
Rotterdam, 5 cs. Hutchinson & Son

Manure—
Stavanger, 112 bgs.

Naphthol—
Rotterdam, 3 cks. Hutchinson & Son

Phosphate—
Dunkirk, 565 bgs. Wilson, Sons, & Co., Ld.

Pumice Stone—
Rotterdam, 5 cs. Hutchinson & Son

Quicksilver—
Hamburg, 5 btls. Wilson, Sons, & Co. Ld.

Starch—
Bremen, 3,191 cs. Veltmann & Co.
,, 20
Ghent, 194 pks. Wilson, Sons, & Co., Ld.
Amsterdam, 40 Hutchinson & Son
Antwerp, 514 pks. Wilson, Sons, & Co., Ld.

Stearine—
Amsterdam, 2 cks. 1 bg Hutchinson & Son
Hamburg, 12 brls. Wilson Sons, & Co, Ld
Antwerp, 67 bgs. ,,

Tallow—
Dunkirk, 48 cks. Wilson, Sons & Co, Ld.

Tartar—
Bordeaux, 4 cks. Rawson & Robinson

Turpentine—
Bordeaux, 10 brls. Rawson & Robinson

Ultramarine—
Rotterdam, 1 ck. Hutchinson & Son

Varnish—
Antwerp, 2 cs. Bailey & Leetham

Vermilion—
Bremen, 1 cs. Veltmann & Co.

White Lead—
Rotterdam, 49 cks. Hutchinson & Son
Amsterdam, 35 ,,

Wood Pulp—
Christiania, 2,979 bls. Wilson, Sons, & Co., Ld.
Drontheim, 432 ,,
Bergen, 477 pks. ,,
Hamburg, 27 ,,
Gothenburg, 308 ,,
Konigsberg, 120 Bailey & Leetham
Abo, 119 J. Good & Sons

GLASGOW.

Week ending August 27th.

Acetate of Lime—
New York, 863 bgs.

Albumen—
Antwerp, 6 cks. 4 cs.
Hamburg, 8

Alum—
Hamburg, 7 cks.

Aniline—
Amsterdam, 2 cks.

Antimony Salt—
Rotterdam, 1 ck. J. Rankine & Son

Barytes—
Hamburg, 67 cks.
Rotterdam, 62 pks.

Bone Meal—
Iceland 200 bgs.
Calcutta, 2,239

Castor Oil—
Calcutta, 249 cs.
Antwerp, 102 cks.

Colours—
Rotterdam, 5 bxs. 11 brls. J. Rankine & Son
,, 40 pks.

Cream of Tartar—
Amsterdam, 4 cks.

Dyestuffs—
Alizarine
Rotterdam, 53 cks. 1 bx. J. Rankine & Son
,, 41 pks.

Indigo
Rotterdam, 1 cht. J. Rankine & Son

Farina—
Delfszyhl, 250 bgs.

Glucose—
New York, 50 brls.

Glue—
Rouen, 16 cks.
Rotterdam, 40 bgs. 6 cs. J. Rankine & Son

Infusorial Earth—
Hamburg, 163 bgs.

Lead Acetate—
Hamburg, 41 cks.

Ochre—
Rouen, 11 cks.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paraffin Scale—
New York, 225 brls.

Pitch—
Archangel, 300 brls.

Pitch Oil—
Rotterdam, 5 cks. J. Rankine & Co.

Potash—
Hamburg, 60 cks.

Potassium Carbonate—
Hamburg, 20 cks.

Potassium Nitrate—
Hamburg, 40 cks.

Salt—
Hamburg, 50 bgs.

Saltpetre—
Hamburg, 62 kgs. 3 cks.

Soap—
New York, 252 brls.
Rotterdam, 1 cs. J. Rankine & Son

Starch—
Baltimore, 400 sks.
New York, 700 bgs.
Antwerp, 64 cs. 100 pks.
Rotterdam, 45 J. Rankine & Son

Sulphur Chlorite—
Rotterdam, 17 carboys J. Rankine & Co.

Tallow—
New York, 20 hf.-brls.

Tar—
Archangel, 1,467 brls.

Tartar—
Bordeaux, 22 cks.

Ultramarine—
Rotterdam, 10 cs.

Varnish—
Antwerp, 1 ck.

Waste Salt—
Hamburg, 284 t.

White Lead—
Rotterdam, 40 cks. J. Rankine & Son

Wood Pulp—
Christiania, 1,658 bls. 48 cs.

Zinc Oxide—
Antwerp, 40 cks.
New York, 150 brls.

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending August 22nd.

Asbestos—
Hamburg, 1 ble. Tyne S. S. Co.

Barytes—
Amsterdam, 46 cks 364 hgs. William Swanston & Sons
Antwerp, 240 bgs. Tyne S. S. Co.

Castor Oil—
Antwerp, 28 brls. Tyne S. S. Co.

Colours—
Rotterdam, 1 bx. 5 brls. Tyne S. S. Co.

Farina—
Hamburg, 50 bgs. Tyne S. S. Co.

Glucose—
New York, 200 pks. Furness, Withy, & Co.

Limestone—
Antwerp, 3 crts. Tyne S. S. Co.

Ochre—
New York, 75 brls. Withy,

Pitch—
Archangel, 300 cks.

Salt—
Hamburg, 280 t.

Saltpetre—
Hamburg, 2 cs., 14 cks.

Soap—
Rotterdam, 3 cs. Tyne S.

Starch—
Antwerp, 38 cs. Tyne S.
Rotterdam, 98

Tar—
Archangel, 2,080 brls.

Tar Oil—
Archangel, 108 cks.

Ultramarine—
Hamburg, 4 cks. Tyne S.

Wood Pulp—
Christiania, 157 bls.

Zinc Oxide—
Antwerp, 15 brls. Tyne S.

Zinc Sulphate—
Gothenburg, 30 cs.

GOOLE.

Week ending August 19th

Alizarine—
Rotterdam, 63 cks. 2 cs.

Aniline—
Rotterdam, 95 cks. 16 cs.

Aluminium Sulphide—
Boulogne, 2 cks.

Barytes—
Antwerp, 300 bgs.

Caoutchouc—
Boulogne, 2 cks. 5 cs.

Colours—
Hamburg, 22 cks.

Dyestuffs *(otherwise undescri*
Hamburg, 19 cks. 2 cs.
Boulogne, 51 5 38 pks
Rotterdam, 144 30

Farina—
Hamburg, 4 bgs.
Harlingen, 1,670

Glucose—
Hamburg, 68 cks.

Lead Acetate—
Hamburg, 29 cks.

Potash—
Dunkirk, 4 cks. 34 dms.
Calais, 21
Antwerp, 4

Saltpetre—
Hamburg, 4 cks. 20 bgs.
Rotterdam, 100 bgs.

Sodium Silicate—
Rotterdam, 2 cs.

Starch—
Ghent, 20 bxs.

Waste Salt—
Hamburg, 190 t. 216 cks.

Wood Pulp—
Hamburg, 570 bls.

Zinc Oxide—
Hamburg, 5 cks.

GRIMSBY.

Week ending August 22nd.

Caoutchouc—
Antwerp, 2 cs.

Chemicals *(otherwise undescri*
Hamburg, 7 pks. 7 cs.

Colours—
Hamburg, 9 cks. 2 cs.
Rotterdam, 5 2
Antwerp, 47

Lamp Black—
Malmo, 20 cks.

Paint—
Hamburg, 20 pks. 13 dms.

Plumbago—
Rotterdam, 2 cks.

Starch—
Antwerp, 66 cs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 26th.

—			
an,		12 c.	£12
l—			
ceston,	4 t.	17 c.	£21
erdam,	5		30
onia (Liquid)—			
ane,	2 t.	6 c.	£65
onium Carbonate—			
ourne,	20 cs.		£32
ey,	15		25
eaux,	10 cks.		26
York,	25		180
hama,	2 t.	10 c.	68
n,	5	10	136
onium Chloride—			
izonde,	1 t	3 c.	£40
um,	2		75
gue,	2	17	59
eldorf,	5	5	120
in,		3 cks.	32
ey,		20	108
land,	1		22
onium Sulphate—			
eira,	10 t.	5 c.	£90
verp,	100		770
kirk,	10		75
burg,	231		1,873
en,	24		195
fairwater,	50		385
ic—			
er,	45 drs.		£38
phite of Lime—			
atta,	30 brls.		£77
hing Powder—			
le Janeiro,		10 c.	£33
t—			
ondon,	6 cs.		£27
land,	2 t.		41
um Chloride—			
castle,	1 t.	5 c.	£125
nic Acid Gas—			
y,	70 tubes.		£26
ic Potash—			
o,		10 c.	£13
ic Soda—			
ganui,		8 c.	£19
ourne,	1 t.	11	41
an,		11	11
delphia,	226	14	1,593
icals *(otherwise undescribed)*			
ga,	1 t.	11 c.	£20
land,	14 cks.		116
elona,	14 cs.		214
a.	2 t.	16	172
nhagen,	1	3	48
ourne,	7 cs. 20 cks.	10 kgs.	280
kirk,	2		13
Acid—			
atta,	1 ck.		£17
lymouth,		2 kgs.	13
gne,	1	10	126
burg.		29	180
'etersburg,		5	31
on,	5		22
elona,		10	59
terdam,		6	40
ane,		2	14
enburg,	1		15
nhagen,	2	70	70
erdam,	1		38
Town,	5		32
eldorf,	1	2	68
Products—			
izarine			
on,	12 cks.		£1°0
'etersburg,	6 cs.		399
iline Dyes			
ourne,	1 cs.		£17
aru,		28 pkgs.	235
bay,		30 cks.	73
sin,	20		175
iline Oil			
kirk,	10 drs.		£470
York.	9		420
iline Salts			
kirk,	5 cks.		£45
erdam,	5		45
thracene			
erdam,	113 cks.		£575
gne,	480		2 511
eldorf,	360		1,853
Benzol			
Hamburg,	9 cks.		£190
Rotterdam,	18 pps.		125
Stockholm,	2 drs.		60
Carbolic Acid			
Antwerp,	22 cans		£33
Hong Kong,	20 drs.		13
Santos,		31 pkgs.	69
Calcutta,	28		20
Rouen,		20	35
Barcelona,	10 cks.		64
Rotterdam,	40		183
Trinidad,		1 cs.	17
Algoa Bay,	6		13
Malta,		10	22
Montreal,	20		60
Boston,	15		124
Creosote			
New York,	1,753 cks.		£773
Naphtha			
Treport.	24 cks.		£74
Sydney,	5 cts.		10
Naphthaline			
Hamburg,	718 bgs	81 pkgs.	£239
Antwerp,	2 cks.		17
Copenhagen,	66 bgs.		36
Pitch			
New York,	850 cks.	1,101 bgs.	£702
Malmo,	18	15 t.	39
Alexandria,	200 brls.		66
Boston,	500		310
Hochfeld,		335	675
B. Ayres,	30		13
Tar			
Boston,	500 brls.		£335
Antwerp,	20		10
Sydney,	300 drs.		55
Tar Oil			
Rotterdam,	49 cks.		£20
Coal Products *(otherwise undes.)*—			
Calcutta,	26 brls.		£13
Sydney,	200 drs.		41
Copper Sulphate—			
Marseilles,	25 t.		£453
Launceston,	2	15 c.	54
Aden,	2	4	38
Cream of Tartar—			
Wellington,	1 t.	10 c.	£150
Auckland,	1	10	148
Brisbane,		5	21
Disinfectants—			
Algoa Bay,	50 pks.		£38
Montreal,	5		18
Calcutta,		60 drs.	60
Sydney,	29		37
Hamburg,	100 cks.		500
Magnesia—			
Wellington,	10 cs		£21
Manure *(otherwise undescribed)*—			
Madeira.	10 t		£30
Rochefort,	112		415
Rouen	30		180
Jersey,	39		1,077
Genoa,	149	11 c.	540
Gothenburg,	68	19	175
Riga.	151	16	320
Stettin,	50	11	135
Philadelphia,	1	15	28
Memel,	600		1 470
Nitric Acid—			
Jersey.	20 crbys.		£40
Oxalic Acid—			
Melbourne,	1 t.		£35
Auckland,		7 c.	13
Phosphoric Acid—			
Berbice,	20 cks.		£64
Phosphorus—			
Wellington,	3 cs.		£31
Melbourne,	3		37
Potash—			
Tarceira,	2 t.	6 c.	£38
Melbourne,	1	5	62
Brisbane.		10	10
Potash Salts—			
D lagoa Bay,	7 t.	5 c.	£701
Auckland.	21	5	1,990
Potassium Bicarbonate—			
Philadelphia.	16 c.		£20
Potassium Chlorate—			
E. London,	16 kgs.		£31
Potassium Cyanide—			
Delagoa Bay,	3 t.		£357
Fremantle,	16 cs.		205
Potassium Iodide—			
Calcutta,	1 cs.		£30
Potassium Nitrate—			
Melbourne,	20 bgs.		£21
Potassium Prussiate—			
Antwerp,	1 ck.		£23
Philadelphia,	10		193
Saltpetre—			
Oporto,	1 t.	17 c.	£38
Rio de Janeiro,	11	19	269
Sydney,	4		92
Santos,	31	13	713
E. London,		9	11
Gothenburg,	1		21
Auckland,		10	11
Sheep Dip—			
Launceston,	25 cs.	40 drs.	£50
B. Ayres,	2,500	150 crts.	7,982
Dunedin,	50	100	69
Odessa,	75		188
Melbourne,	2	90	63
Brisbane,		12	12
Wellington,	75		188
Lyttelton,	1		11
Sydney,		100	125
Silicate of Soda—			
Adelaide,		4 c.	£24
Soda Crystals—			
Tarceira,		16 c.	£3
Sodium Bicarbonate—			
Perth,	5 t.	5 c.	£39
Sydney,	7	10	60
N. Plymouth,	1		8
Sodium Hyposulphite—			
Boston,	11 t.	15 c.	£66
Sodium Prussiate—			
Bremen,	1 ck.		£16
Strontium Nitrate—			
New York,	125 kgs.	18 brls.	£248
Sulphur—			
E. London,	1 t.	7 c.	£15
Superphosphate—			
Auckland,	50 t.		£150
Demerara,	4	19	63
Tartaric Acid—			
Algoa Bay,		5 c.	£32
Callao,	10 cs.		114
Brisbane,		13	82
Sourabaya,		2	15
Melbourne,	5 kgs.		32
St. Petersburg,	1 ck.		19
Perth,	2 kgs.		21

LIVERPOOL.

Week ending August 26th.

Alum—				
San Francisco,	84 cks.			£65
Patras,	1 t.	9 c.		7
Braila,	5	1	2 q.	£24
Varna,	1	6		6
Cape Town,	2	19		15
Callao,	4	8	3	20
Madras,	2	6	1	10
Galatz,	3		2	18
B. Ayres,	2	8	3	12
Oporto,	1	4		6
Talchuano,	3	10		18
Valparaiso,	4	5		21
Aluminium—				
New York,	1 t.			
Aluminous Cake—				
Calcutta,	13 t	19 c.	2 q.	£61
Ammonium Carbonate—				
Odessa,	2 t.			£55
Ammonium Chloride—				
Hamburg,	1 t.	19 c.		£55
B. Ayres.		12		16
Melbourne,	1	6	2 q.	32
Ammonium Sulphate—				
Palermo,	5 t.		2 q.	£40
Teneriffe,	25			20
Sydney,	12	3 c.	2	65
Genoa,	39	18	2	320
Leghorn,	20	11	3	165
Las Palmas,	28	10		229
Barium Chlorate—				
Hamburg,		6 c.		£24
Binitro Naphthaline—				
Bilbao,	2 t.			£80
Bisulphite of Lime—				
St. John's, N'fld.,		15 c.		£5
Bleaching Powder—				
Boston,	267 cks.			
B. Ayres,		7 brls.		
Dunkirk,	18			
Leghorn,	12			
Montreal,	28			
Naples,	31			
New York,	289			
Paris,	18			
Venice,	10			
Vera Cruz,		10 brls.		
Bombay,	8 cs.			
Boracic Acid—				
Hamburg,	1 t.	4 c.	2 q.	£30
Borax—				
Antwerp,	4 t.	18 c.		£98
Sydney,	7			135
Halifax,	1	7	3 q.	28
Montreal,	4		1	80
Shanghai,	1	3	3	24
Hamburg,	15	18		316
Rotterdam,	53	12	3	1,076
Gibraltar,		8		8
Stettin,	6	6	3	128
Calcium Chloride—				
Boston,	50 t.	4 c.		£102
Carbolic Acid—				
Algoa Bay,		3 c.	1 q.	£7
Odessa,		6	1	23
Leghorn,		10		36
B. Ayres,		5		22
Hamburg,	12 t.	11	2	692
Rouen,	5	2		275
New York,	1	12	1	119
Santander,		7	3	98
Genoa,		12	1	40
Carbonic Acid Gas—				
Rangoon,	1 t.	16 c.		£75
Caustic Potash—				
Baltimore,	5 t.	12 c.		£213
Caustic Soda—				
Alexandria,	14 dms.			
Amsterdam,	81			
Barcelona,	100			
Beyrout,	21			
Brindisi,	38			
Catania,	25			
Coruto,		15 cks.		
E. London,	26		3 bxs.	
Fremantle,		17		
Genoa,	35			
Hamburg,	176			
Leghorn,	35			
Malaga,	144			
Montreal,	35	11 brls.		
New York,		10 cs.		
Oporto,	15			
Para,	20			
Paris,	65			
Pernambuco,	175			
Philadelphia,	389			
Puerto Cabello,	20			
Rangoon,	15			
Santillo,	35			
Seville,	10			
Singapore,		25 tcs.		
Tampico,	35			
Tarragona,	30			
Volo.	80			
Vera Cruz,	50			
Alicante,	25			
Bilbao,	70			
Brisbane,	60			
B. Ayres,	125			
Chemicals *(otherwise undescribed)*				
M. Video,	2 t.	10 c.		£3
Rotterdam,		7		13
Hamburg,		15		26
Montreal,	2	11		15
China Clay—				
Barcelona.	200 bgs.			
Calcutta,	80			
New York,	610			
Piræus,	100			
Boston,	250	1,432 cks.		

Maranham, 60 20
Pernambuco, 80
Rio de Janeiro, 30

Chromium Trioxide—
Hamburg, 11 c. £35

Citric Acid—
Piræus, 3 c. £19

Coal Products—
Aniline Oil
Genoa, 5 dms.
Barcelona, 22 cs.
Aniline Salts
Genoa, 12 cks.
New York, 13
Santos, 15 cs.
Boston, 20
Anthracene
Rotterdam, 15 cks.
Creosote Oil
Bordeaux, 250 brls.
Copenhagen, 95
Naphthaline
Bilbao, 8 cks.
Pitch
Valparaiso, 30 brls.
Tar
Genoa, 1 ck.
Leghorn, 17
Accra, 93 brls.
Tar Salts
Genoa, 20 cs.

Copper Sulphate—
Palermo, 4 t. 19 c. 2 q. £79
Konigsberg, 1 4 19
M. Video, 4 14 2 74
Catania, 6 1 83
Copenhagen, 1 7 2 22
Havre, 9 34
Rouen, 15 245

Copperas —
B. Ayres, 7 t. 12 c. £14
Patras, 1 10 3
M. Video, 2 13 1 q. 5

Disinfectants—
Opobo, 10 cks. £5
Calcutta, 3 t. 38
Lisbon, 9 c. 22
New York, 3 3 45

Dyewood—
Montreal, 125 bgs.

Farina—
Montreal, 5 cks.

Iron Oxide—
Valparaiso, 22 t. £51

Lime—
Opobo, 2 t. 10 c. £8
Pernambuco, 15 18 39

Litharge—
Oporto, 7 cks.
Montreal, 1

Magnesia—
Sydney, 3 c. 2 q. £8

Magnesium Chloride—
Paris, 10 t. 4 c. £25
Rangoon, 4 9 18

Magnesium Sulphate—
Oporto, 15 c. £5

Manure—
Venice, 246 t. 6 c. £616
Marseilles, 90 19 2 q. 406
Rochefort, 400 4 1 1,020

Muriatic Acid—
Oporto 1 t. £8

Oxalic Acid—
Boston, 9 t. 8 c. £260
Stettin, 1 2 q. 36

Paint—
Adelaide, 20 cks.
Algoa Bay, 2
Belize, 4 cks. 420 kgs.
B. Ayres, 1
Calcutta, 6 cs.
Callao, 25 10
Digama, 2
Galata, 100
Hamburg, 5 50 bgs.
Honolulu, 2
Lagos, 25
Malta, 14
Mauritius, 250
Mayaguez, 18
M. Video, 3 10 brls.
Boca, 24
Buenaventura, 4 cs.
Carthagena N.G., 8
Curacao, 155
Genoa, 10
Iquique, 210
Kerasunde, 6
La Libertad, 25
Manaos, 9 116 8 brls.
Smyrna, 100
Talcahuano, 19 60

Painters' Colours—
Adelaide, 120 kgs.
Antonina, 10 1 cs.
Bombay, 12
Boston 15 brls.
B. Ayres, 11 101
Colombo, 35 bgs.
Leghorn, 4 pks.
Manaos, 6 4 cks. 7 tcs.
N. York, 100 20
Old Calabar, 13
Parnaguga, 70 4 cs.
12 brls.
Parnahyba, 6 2 brls.
Punta Arenas, 3
Rangoon, 1 cs. 46 pks.
Rio de Janeiro, 49
Sierra Leone, 4
Smyrna, 6 1
Sydney, 33
Alexandria 1 bx. 20 6 brls.
40 dms.
Antwerp, 8 10 bgs.
Calcutta, 60
Lisbon, 5 dms.
Oporto, 20 7 52 brls.
Patras, 5
Rotterdam, 19 27 100 bgs.
Savanilla, 4 cs.
Valparaiso, 20 14
Maranham, 14 3 54 brls.
Para, 29 2 15
12 cs. 5 dms. 8 tcs.

Paraffin Wax—
Genoa, 20 bgs. 10 cs.
Leghorn, 20
Naples, 35
Marseilles, 100

Phosphorus—
Pernambuco, 9 c. £117

Potash —
La Plata, 6 c. £6
Lagos, 11 12

Potassium Bichromate—
Syra, 18 c. 1 q. £58

Potassium Carbonate—
Valencia, 2 t. 8 c. 3 q. £32

Potassium Chlorate—
New York, 2 t. 10 c. £97
Boston, 2 10 97
St. Petersburg, 5 196
Amsterdam, 4 8
Calcutta, 10 90
Pernambuco, 1 10 2 q. 80
Gutejewsky, 10 420
Philadelphia, 5 188
Kalmar, 2 80
Hamburg, 9 16
Rotterdam, 1 6 51
Bari, 10 20
Hiogo, 10 361
Odessa 2 10 92

Potassium Prussiate—
Lisbon, 1 brl. £7
Genoa, 10 c. 60

Potassium Silicate—
Alexandria, 1 t. 2 c. 1 q £6

Salt —
Ad laide, 20 t.
Antwerp, 125
Boston, 200
Ghent, 110
Guernsey, 100 cs.
Jersey, 250
Manaos 7
Montreal, 300
Newcastle, 240
Para, 340 12 c.
Portland, Or., 330
Valparaiso, 300
Aligator Pond, 8
Brisbane, 100
B. Ayres, 5 1
Calcutta, 2 826
E. London, 4
Galveston, 1,996
Gibraltar, 2
Iceland, 230
Lagos, 118
Melbourne, 25
Natal, 429
New York, 168 19
Philadelphia, 200
Quebec, 500
Rosario, 30
Rotterdam, 250
San Francisco, 98 4
Savannah, 625
Sydney, 505
Trinidad, 34 6
Reykjavik, 135
N. Orleans, 500
Maranham, 71

Salt Cake—
Antwerp, 102 t. 11 c. £134
Lyttleton, 2 4

Salts of Potash—
Corinto, 1 t. 10 c. £178

Salts of Saltpetre—
B. Ayres, 1 t. £24

Sheep Dip —
M. Video, 2 t. 4 c. £40
Savanilla, 4 1 q. 8
B. Ayres, 766 17 2 1,913

Soap —
Amsterdam, 500 cs. 90 bxs.
Antwerp, 1,500 5
Barbadoes, 451
Bombay, 13
Calcutta, 59
Cape Coast, 800
Cape Town, 100
Carbonear, 20
Colon, 950
Copenhagen, 70
Genoa, 220
Gibraltar, 160 100
Hamburg, 445
Honolulu, 2
Havre, 755
Iquique, 10 30 dms
Jersey, 60
Lagos, 26 80
Las Palmas, 230
Malta, 30
Manaos, 1 300
New York, 500
Para, 100
Penang, 15
Philadelphia, 500
Piræus, 110
Pt. Natal, 260 2,031 6 bdls.
Rangoon, 6
Rotterdam, 440
St. John's N'fd., 55
Shanghai, 4,946
Syra, 100
Teneriffe, 385
Abonnema, 125
Algoa Bay, 1,090
Auckland, 300
Baltimore, 30
Boston, 500
Buguma, 125
Christchurch, 300
Curacao, 58
Delagoa Bay, 20 850
Demerara, 450
Dunedin, 400
E. London, 1,010
Mazatlan, 2,425
La Guayra, 1
Maranham 1
Mauritius, 1 009
Pt Elizabeth, 54 260 4 brls.
Savannah, 50
Sydney, 75
Valparaiso, 2
Wellington 500
Constantinople, 46

Soda —
New York, 37 cks.

Soda Alkali—
Genoa, 35 brls.
Dunedin, 42

Soda Ash—
Amsterdam, 7 cks. 50 bgs.
Baltimore, 470
Boston, 63 tcs. 880
B. Ayres, 100 brls.
Ghent, 18 30
Hamburg, 15
Maranham, 20
Montreal, 8
New York, 58 tcs, 364 bgs.
Paysandu, 50 brls.
Pernambuco, 30
Pt. Natal, 12 cks.
Rio de Janeiro, 181
Syra, 50
Venice, 8
Yokohama, 100
Antwerp 400 bgs.
Brisbane, 68

Soda Crystals—
Alexandria, 50 brls.
New York, 140 cks.
Philadelphia, 420
Pt. Natal, 30 kgs. 10
St. John's, N'fld. 30
St. Petersburg, 150
Quebec, 100

Sodium Bicarbonate—
Amsterdam, 70 kgs.
Antwerp, 65 110 bgs.
Bombay, 250
Constantinople, 50
Genoa, 48 55 cks.
Ghent, 30
Kobe, 1,000
Marseilles, 8
Montreal, 300
N. Orleans, 10 cs.
Santos, 50
Stamboul, 30
Yokohama, 500
Bordeaux, 90 30 brls.
Brisbane, 260
Honolulu, 20

Sodium Carbonate—
New York, 56 brls.

Sodium Chlorate—
Odessa, 25 bgs.
Rotterdam, 90
Hamburg, 10

Sodium Silicate —
Boston, 30 cks.
Corfu, 55
Corinto, 23
Corunna, 10
Fremantle, 16
Genoa, 4 brls.
Kingston, 10
Naples, 10
Piræus, 16
Wellington, 2

Sulphur—
Boston, 125 t. 5 c. £
Copenhagen, 60
San Francisco, 50 2

Sulphuric Acid—
Maranham, 12 c. £

Sumac Extract—
Montreal, 15 cks.

Superphosphates—
Las Palmas, 10 t. £

Varnish—
Barcelona, 3 cs.
Genoa, 4
Leghorn, 6 2 cks. 7 pks.
Manaos, 1
Curacao, 2
Trieste, 1

White Lead—
Half Jack, 4 cks.

Zinc Chloride—
Odessa, 1 t. 1 c. £

MANCHESTER

Week ending August 28th.

Alum—
Sannesund, 40 t. 10 c.

Anthracene—
Rotterdam, 12 t. 18 c.

Aniline Colours—
Hamburg, 2 cs.
Rotterdam 7 cks.

Aniline Salt—
St. Petersburg, 14 pns.

Aurine—
Hamburg, 9 cks.

Benzol —
Rotterdam, 83 cks.

Colours—
Sannesund, 8 cks. 2 brls. 3 kgs.

Creosote Salts—
Treport, 22 cks.

Pitch—
Antwerp, 101 t.

Rosin —
Sannesund, 150 brls.

Soda Ash—
Sannesund, 200 bgs

Tar—
St. Petersburg, 20 dms.

Tar Oil—
Hamburg, 18 cks.
Treport, 50 brls.

Tar Salts—
Rotterdam, 7 cks.

Toluol—
Rotterdam, 20 dms.

HULL.

Week ending August 22nd.

Alkali—
Constantinople, 370 cks.

Ammonium Sulphate—
Antwerp, 185 bgs.

ol—
terdam, 21 cks.
erdam, 29
ching Powder—
zig, 17 cks.
born, 43
tin, 25
nicals *(otherwise undescribed)*
terdam, 20 pks.
werp, 3 cks.
enhagen, 6
stiania, 8 1,039 slabs
itheim, 10
zig, 10 7 cs.
ba, 45
enburg, 15 5
burg, 10 345
les, 33
sa, 75
erdam, 16 14 46
in, 4
nseed Oil—
terdam, 124 c.
werp, 1,426
nen, 375
nhagen, 100
stiania, 42
stiansand, 55
enburg, 151
burg, 548
erdam, 1,159
in, 17
tuffs *(otherwise undes.)*—
erdam, 3 cks. 5 cs.
ed Oil—
terdam, 223 c.
werp, 430
nen, 3
en, 24
stiansund, 52
nhagen, 55
stiania, 603
stiansand, 109
tantinople, 17
itheim, 147
burg, 319
erdam, 69
in, 501
re—
kirk, 10 t.
ericksbavn, 16,774 bgs.
a, 128
thaline—
250 bgs.
ers' Colours—
erdam, 3 pks
nhagen, 6 2 cs.
tiania, 1 ck.
tiansand, 1 44 28 dms.
kirk, 2
itheim, 1 cs.
a, 42 1
t, 37
burg, 7 80
ingen, 2
eilles, 8
es, 24 dms.
sa, 54
erdam, 12 1 cs.
nger, 1
'etersburg, 110
in, 13 1
holm, 5
fin Wax—
a, 100 bgs.
—
werp, 165 t. 32 bls.
—
enburg, 1 c.
h—
ig, 10 bgs.
w—
tiania, 2 cks
kirk, 96
a, 74
enburg, 5
erdam, 31
erdam, 12 cks.
kirk, 50
itheim, 5
ig, 15
burg, 12
gsberg, 5
erdam, 10
l—
erdam, 23 cks.
ntine—
itheim, 3 cks.

Varnish—
Antwerp, 1 c.
Ghent, 4
Gothenburg, 1
Stettin, 1

GLASGOW.

Week ending August 27th.

Ammonium Sulphate—
Demerara, 4 t.
Palermo, 20 18 c.
Rouen, 36 5½
Dunedin, 8 19¾
Asbestos—
Calcutta, £59
Bleaching Powder—
Melbourne, 27 t. 13¾ c.
Dunedin, 6 ½
U.S.A., 7 8½
Caustic Soda—
Melbourne, 6 t. 6¼ c.
Dunedin, 10 10½
Chemicals *(otherwise undescribed)*
Lyttleton, £29
Egersund, 11
Coal Products—
Creosote
Russia, £77
Creosote Oil
U.S.A., £31
Christiania, 6
Hamburg, 42 t. 8 c.
Naphtha
Rouen £70
Dunedin, 26
Wellington, 35
Pitch
Russia, £70
U.S.A., 142
Canada, 118
Montreal, 45
Helsingfors, 60 t. 3 c.
Tar
Hamburg, 42 brls.
St. Petersburg, 1,961
Russia, £235
U.S.A., 56
Canada, 153
Rangoon, 78
St. John's, N'fd., 3 t. 15 c.
Helsingfors, 850
Coal Products *(otherwise undes.)*—
Rotterdam, £282
Dextrine—
Melbourne, £20
Extracts—
Antwerp, £38
Canada, 670
Farina—
U.S.A., 4 t. 19¼ c.
Gelatine—
Canada, £73
Dunedin, 31
Iodine—
Rotterdam, £245
Lamp Black—
Melbourne, £20 13s.
Lead Nitrate
Canada, £93
Linseed Oil—
Adelaide, 3 t. 19 c.
Dunedin, 3 10
Pt. Elizabeth, 1 8½
Wellington, 4 13¾
B. Ayres, 7,500 lbs.
Canada, 5 2¼
Mollendo, 4 8¼
Logwood—
Canada, £86
Dunedin, 280
Lyttleton, 60
Melbourne, 72
Wellington, 43
Magnesium Sulphate
Christiania, £31
Manure—
Paris, 10 t. 1 c.
Rouen, 20 ½
Ochre—
U.S.A., £41
Paint—
Wellington, £47
B. Ayres, 22
Callao, 52
Coronel, 120
M. Video, 40
Painters' Colours—
Perth, £59
Adelaide, 44 15s.
Auckland, 300
Bombay, 84
Christchurch, 119
Dunedin, 600
Invercargill, 41
Lyttleton, 175
Melbourne, 102
Pt. Elizabeth, 96
U.S.A., 68
Rangoon, 56
Paraffin Wax—
Barcelona, £360
Hamburg, 10 t.
Cape Town, 42
Naples, 140
Rouen, 52
Russia, 1,440
Christiania, 4
Potassium Bicarbonate—
Brisbane, 5 t. 8 c.
Potassium Bichromate—
Boston, £159
Canada, 198
Rouen, 393
Potassium Prussiate—
Barcelona, 2 t. 13¾ c.
Sheep Dip—
Dunedin, £850
B. Ayres, 321
Soap—
Reunion, 4 t. 10 c.
Sodium Bichromate—
Rouen, 6 t. 11½ c.
Ghent, 5 2
Sulphuric Acid—
Bombay, £1,472
Rangoon, 265
Treacle—
Amsterdam, 2 t. 13½ c.
Christiania, 27 9
Varnish—
Pt. Elizabeth, £44
White Lead—
Melbourne, £141
Whiting—
Rangoon, 10 t.
Zinc Sulphate—
Antwerp, £43

TYNE.

Week ending August 22nd.

Alkali—
Amsterdam, 19 t. 3 c.
Rotterdam, 12 5
Antwerp 2 5
Christiania, 7 16
Aluminous Cake—
Marseilles, 78 cks.
Antimony—
New York, 45 t.
Rotterdam, 5 10 c.
Arsenic—
Amsterdam, 12 c.
Asbestos—
Bergen, 2 q.
Barium Binoxide—
New York, 3 t. 4 c.
Barium Carbonate—
Odense, 10 c.
New York, 153 t. 19
Hamburg, 10
Bleaching Powder—
Odense, 6 t. 4 c.
St. Petersburg, 45 10
Copenhagen, 2 2
New York, 49 14
Aarhuus, 10 2
Rotterdam, 32 16
Ghent, 25 4
Hamburg, 4 19
Antwerp, 32 7
Christiania, 33 1
Amsterdam, 34 12
Carbolic Acid—
Odense, 12 c.
Antwerp, 1 q.
Castor Oil—
Antwerp, 1 c.
Caustic Soda—
Amsterdam, 1 t.
St. Petersburg, 24 19 c.
Copenhagen, 2 18
New York, 164
Aarhuus, 1 3
Rotterdam, 1 16
Stockholm, 2 18
Gefle, 4 19
Antwerp, 2 14 16 lbs.
Montreal, 17 8
Christiania, 3 6
Colours—
Copenhagen, 2 c.
Bergen. 3
Lamp Black—
Amsterdam, 1 t. 15 c.
Linseed Oil—
Antwerp, 1 c.
Montreal, 25 brls.
Litharge—
Copenhagen, 3 t. 14 c.
Stockholm, 15
Magnesia—
Odense, 8 c
St. Petersburg, 1 t.
Hamburg, 5
Paint—
Ergastiria, 16 c.
Hamburg, 1 t. 14
Antwerp, 6 1
Soap—
Antwerp, 2 q.
Soda—
Amsterdam, 20 t.
Arendal, 5 3 c.
St. Petersburg, 18 12
Frederikshaven, 5 16
Hamburg, 53 4
Stockholm, 43 15
Antwerp, 1
Christiania, 20 6
Soda Ash—
Bergen, 6 t.
New York, 16 17 c.
Sodium Hyposulphite—
Montreal, 10 t. 5 c.
Sodium Silicate—
Hamburg, 3 t. 13 c.
Sodium Sulphate—
Drammen 100 t. 2 c.
Gothenburg, 230
Sulphur—
Antwerp, 10 t. 1 c.
Gothenburg, 50
Superphosphate—
La Rochelle, 1,271 t.
Turpentine—
Antwerp, 2 q.
Varnish—
Antwerp, 1 q.
White Lead—
Copenhagen, 1 t. 1 c.
Stockholm, 12 3
Montreal, 25 6

GOOLE.

Week ending August 19th.

Chemicals *(otherwise unaescribed)*
Antwerp, 1 ck.
Boulogne, 5
Coal Products *(otherwise undes.)*—
Antwerp, 3 cks. 1 dm.
Boulogne, 32
Rotterdam, 272 6
Colours—
Amsterdam, 100 bgs.
Boulogne, 1 dm.
Ghent, 6 cks.
Hamburg, 9 4 cs.
Dyestuffs *(otherwise undescribed)*
Calais, 1 cs.
Ghent, 2 6 cks.
Hamburg 102 92 bgs.
Rotterdam, 46
Pitch—
Antwerp, 100 t.

GRIMSBY.

Week ending August 22nd.

Alkali—
Hamburg, 20 cs.
Malmo, 1 ck.
Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Hamburg, 2 10 bottles
Malmo, 2 10
Coal Products *(otherwise undes.)*—
Dieppe, 155 cks.
Colours—
Antwerp, 1 ck. 1 cs.
Dieppe, 1
Hamburg, 73 5 pks.
Dyestuffs *(otherwise undescribed)*
Dieppe, 5 cks. 1 cs.
Guano—
Hamburg

PRICES CURRENT. WEDNESDAY, SEPTEMBER 2ND

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. ..per cwt.	5/6 & 8/6		
,, Glacial .. .. ,,	40/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¼
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	5	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	5	0
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	16	3
,, ,, (grey) Hull .. .. ,,	7	12	6
Aniline Oil (pure) .. .. per lb.	0	0	10¼
Aniline Salt ,, ... ,,	0	0	9¾
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	12	0	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	4	6
,, 50/90 ,, ... ,,	0	3	1
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	6¼
,, (crude 60°) .. .. per gallon	0	2	2
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	12	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	47	12	6
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	5	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	22	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	7		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magnesia .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. .. per ton	2		
Manganese, Sulphate .. .. ,,	16		
,, Borate .. .. per cwt.	2		
,, Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils:—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	18		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	20		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. ..nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	20		
,, ,, (Caustic Potash) 70/75 % .. ,,	19		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4		
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3		
,, ,, (Soda Crystals) .. .. .. ,, ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton.	20		
,, Bichromate .. .. per lb.	0		
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	6		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25% .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	8		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	6		
,, (Roll Brimstone) .. .. ,,	6		
,, Brimstone: Best Quality .. .. ,,	4		
Superphosphate of Lime (26% .. .. ,,	2		
Tallow .. .. ,,	18		
Tin Crystals .. .. per lb.	0		
,, English Ingots .. .. per ton	63		
Zinc (Spelter) .. .. ,,	17		
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5		

THE

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TENDER.

TAR CONTRACT.

THE Corporation of Blackpool are prepared to receive Tenders for the Purchase of the Surplus TAR produced at their Works during the next 12 months from September 30th.

Particulars on application to the undersigned

Tenders (endorsed) to be sent to the office of the Gas Committee by SATURDAY, the 26TH SEPTEMBER.

(Signed) JOHN CHEW,
Gas Engineer.

Gas Office, Blackpool, September 10th, 1896.

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A RETROSPECT OF SEWAGE TREATMENT.

THE treatment of sewage has been an engrossing topic during the last decade, and it is therefore pardonable to indulge in a retrospect of the progress that has been made towards the solution of this admittedly difficult problem.

The experience of the last ten years has very clearly shown that if only partial success has attended the efforts of those who have endeavoured to lead the way to success, the fault has not been due to lack of processes. On the contrary they have been as plentiful as mushrooms, and some of them have been very mushroom-like in their growth and career. It would seem that the causes of failure have been chiefly due to the multiplicity of immatured efforts. In a crude state processes have been brought before the public and represented as panaceas for the treatment of sewage, and their failure has consequently been all the more manifest, with the result that the majority of people have come to look with disfavour upon sewage processes as a whole. In a measure this is unjustifiable, but that such is the present state of affairs there is no gainsaying, and consequently the problem has now to be dealt with accordingly.

There are not wanting instances of what may be fairly termed successful treatment, but unfortunately what does for one town seldom appears to work successfully for another. There is such a tremendous difference in the nature of sewage from different towns that each one presents a distinct and separate task, which must be honestly coped with by direct experiment and investigation. In some cases the cause of failure is the putrefying tendency of the effluent, in others the difficulty of disposing of the sludge or rendering the same innocuous. In large towns the latter task proves a serious bugbear, and so great are the difficulties surrounding it that at the present time they seem almost insurmountable. With regard to the successes which undoubtedly can be recorded, it is unfortunate that, as a general rule, close investigation of the details of the process leads to the discovery of some special facility either in position or in the nature of the sewage.

In the face of the foregoing, it is therefore not altogether surprising that the latest scheme put forward by the Manchester Corporation should be a departure from the usual lines of treatment; in fact, it is virtually a departure from treatment altogether, in the associated sense of the word, since it is proposed to merely precipitate the solid matters in solution, and then convey both sludge and effluent out to sea. By so doing practically all the bacteriological and chemical investigations which have been made with a view to determining a successful method for effluent filtration and sludge disposal are given the go-by.

It may be thought that so far our criticism has been distinctly Carlyleian, in that it is destructive rather than constructive, and it certainly is the just due of those who have

done so much well meant and honest work in connection with the disposal of sewage, that we should say a word in expiation of the indifferent success which has attended their efforts.

In the first place, many years ago, when the sewage question was in embryo, the Local Government Board pinned their faith to land filtration, and still, after the lapse of some ten or fifteen years they continue, with ostrich-like stupidity, to bury their heads in the quick-sands of land filtration, and fatuously flatter themselves that they are safely intrenched in an invulnerable position. All those who have proceeded to devise methods of treatment have had to face the fact that land filtration is considered a *sine qua non* by the powers that be, and they must not be blamed if they sought to devise methods upon the principles involved in land filtration. At the same time, knowing this, it is not so difficult to see why the outcome of their endeavours have been so insignificant. To start with, land filtration is slow, a good deal too slow for the hurry-scurrying age in which we live. It also entails certain conditions, one and all of which are essential to success, and yet collectively most difficult to attain. First you want land; secondly it must be suitable land. Then there is the cost of preparing it, and lastly the task of maintaining it in a state of efficiency. Not unnaturally, it has been thought, that by constructing artificial filters many of these difficulties could be obviated, and there is no doubt that for moderate quantities of sewage the problem of constructing efficient artificial filters has been solved But nearly all the methods which have been devised have been the subjects of patents, and are in consequence heavily discounted by the cost of the working rights, to say nothing of the expenses of maintenance and attendance, which in many cases prove to be serious items.

Competition, it may be thought, would have brought to the front a process which was both practicable and reasonable in cost, but, although we are loth to say it, such has not been the experience of the past ten years.

When, therefore, we come to deal with the sewage of some of our largest industrial centres, we find it is necessary, after all, to avail ourselves of the kindly offices of Mother Nature, who is always willing to take back, in one form or another, whatever she gives us, although we have benefited by the conversion of matter.

Elsewhere in our columns this week we give particulars of the scheme which has been placed before the Manchester Corporation for dealing with their effluent and their sludge. The cost undoubtedly is heavy, and on this score the scheme is certain to meet with considerable opposition, but those who are prone to scoff should bear in mind that when so doing they always lay themselves open to be asked to suggest an alternative method of disposal, and since the scheme, as now put forward, is promising well in Glasgow, any alternative must be not only a *reputedly* good, but a practical proposal. A quarter of a million is truly a lot of money, but how does this heavy initial outlay compare with the cost of the patent rights and the expenses of up-keep of any other existing process?

Probably, now that this somowhat sweeping method of disposal is being seriously contemplated, an effort will be made on the part of those who own what have proved to be satisfactory methods, to place their services at the disposal of Corporations for a more reasonable figure than they have hitherto demanded.

It is an humiliating admission, and we would fain speak differently with regard to the practical utility of the work of the last ten years, but when confronted with the scheme the Manchester Corporation it is not easy to do more th cavil at the expense, which, to say the least, is scarc criticism, neither does it further the solution of the questi Genuine criticism is to be courted, and we shall be plea to assist, through our columns, in ventilating the matter, anything other than constructive criticism can only be indirect admission of the feasibility, if not of the advisabil of this latest scheme, even though it be a resuscitation aboriginal crudities.

OIL IN BOIL R SCALE.

IN a note communicated to the American Chemical Society, M A. Doremus points out the difficulty of removing cylinder whether pure mineral or mixtures of mineral and animal, from densed exhaust steam. The practice of recovering steam either for preparation of distilled water or for boiler feed water is now so gen that opportunities for observing the troubles attending the proce are not wanting.

In describing a sample of water obtained by melting the "core cakes of artificial ice, he says:—The sediment is fine, flocculent an red colour. When removed from the water and dried it is pulveru There is very slight evidence of oil in the dry mass, the moist sedi does not appear oily. The large proportion of oil extracted by e shows how inefficient the filters were in purifying the condensed ste Yet very great pains were taken at the ice plant to secure pure disti water, and there was no visible oiliness in the water as it flowed to freezing cans. Here, however, the corrosive action of the disti water on the galvanized iron produced a mass of iron and zinc hydra which in being pushed to the centre by the gradual formation of gathered the oil and carried it to the core.

Another specimen of scale was obtained from a steamboat traffic on the Hudson river, and using salt or brackish water in the surf condensers. The boilers were said to be foul with masses of coating the sides and tubes. Having determined the presence of salts of sea water in the boiler, due to leaky condensers, a treatm was suggested which caused a fine precipitate. This precipit gathered the oil in masses easily brushed from the crown sheets. W this mass is treated with ether a dry powder remains and oil dissolv

A third specimen was examined from a large plant in Chica evaporating 2,500 gallons of filtered river water and 25,000 conden water every twenty-four hours. Lubricating oil (mineral with ten cent. animal) is freely used, and the fine clay in the water h together with some incrusting ingredients, caused the oil to form balls.

The next two specimens afford a striking contrast to the foregoi One is light-coloured, one-quarter inch thick, has a layer of de nature near what must have been the heated surface on which scale formed, while the bulk of the incrustation is fibrous. The crustation consists of calcium carbonate and sulphate, with which intermingled clay and organic matter, the latter partly oil.

The general appearance of another sample was quite different. T incrustation was in thin sheets about three-sixteenths of an inch thic of light slate colour, and made up of alternating layers of deposit varying hardness The ingredients are again calcium carbonate a sulphate and clay, while there is much organic matter. This can separated from the mineral in great part by a little acid. The presen of oil is then noticeable. The boiler of this plant is fed with La Michigan water and condenser water. The latter goes directly to t hot well of twenty barrels capacity. While there are no oil filters, t boiler is provided with a skimmer, which draws off floating materi from just below the water line. The lubricating oil used is mine with fifty per cent. animal.

Notwithstanding the skimmer, the scale formed and baked into hard mass It is highly non-conducting. It can be held by t fingers quite near to where a portion is heated in a Bunsen flame, t heat of which distils out and ignites the oil. A few pieces of th scale heated in an improvised retort made from a test tube yield qu a gas flame. The presence of oil to the extent of from twenty to fi per cent. in the deposits and scale of marine boilers filled with fre water, any loss being made up from the exhaust or from sea wate has been fully set forth by Lewes, who also gives the causes ther and remedies therefor. He also alludes to the possibilities of this ty of scale forming in stationary boilers.

The specimens serve to illustrate the importance of critical examining the nature of the "*organic matter*" of incrustations, t statement "loss of ignition" being far too general.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Thermometers. E. M. D. Gibb. 18,706. Aug. 24.
Purifying, Drying and Cooling Air for Freezing Purposes. A. J. Boult 18,717. Aug. 24.
Producing Metallic Lustre on Glass, Porcelain, etc. G. Allfeld. 18,729. Aug. 24.
Desulphurising Gas. F. J. Koopmann 18,782. Aug 25.
Improvements in Fluorescent Screens for Utilizing X-Rays E. Payne. 18,859. Aug. 26.
Mordanting Wool and Other Animal Fibre. A. M. Clarke 18,896. Aug. 26.
Process for Separating Rare Earths for the Manufacture of Incandescent Mantles. B. Kosemann. 18,915. Aug. 26.
Producing Ozone Solutions. A. Spranger. 18,921. Aug. 27.
To Manufacture Ice to take the place of Steam and Gas Engine Power by Adapting Hydraulic Power, also Adapted for Cold Air Stores for Pumping Brine or Ammonia or other Chemicals. W. Hutchinson. 18,935. Aug. 27.
Obtaining Sebacic Acid from Fulling Grease Fr. Sahlfeld. 18,940. Aug. 27.
Manufacture of Potassium Cyanide. H. W. Smith 18,953. Aug. 27.
Smoke Consuming Apparatus J. E. Bingham. 18,978. Aug. 27.
Filters W. Defries. 19,039. Aug. 28.
Process and Apparatus for Regenerating Chlorine K. Jung and B. Stener. 19,041. Aug. 28.
Extracting Oxygen from Air. A. F. de Villepigne. V. Fournier and G. Shenton, 19,044. Aug. 28.
Gutta Percha Extracting Process and Apparatus. Siemens Bros. and Co., Ltd., and E. F. A. Obach. 19,046. Aug. 28.
Sewage Purification for Country Houses. A. H. Constable. 19,056. Aug. 28.
Smokeless Explosives. H. Maxim. 19,071. Aug. 28.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Electrolytic Production of Amalgams and their Utilization. E. and G. Andreoli both of Somerleyton-road, London, S.W. Eng. Pat., 15,024. Aug. 9, 1895.

An amalgam is obtained by the electrolytical decomposition of salt, the said amalgam being used to amalgamate copper or other plates to be used in the recovery of gold. A rectangular trough is divided into three compartments by porous diaphragms. The two outer compartments are narrow, leaving a large one in the middle. The two small ones are filled with a solution of salt, and provided with iron or copper anodes. During electrolysis sodium passes into the central compartment, which contains mercury. Particulars are given of the construction of the partitions. The amalgam is then run off into an amalgamator, which is a conveniently-shaped bath for exposing the copper plates to the amalgam As, under ordinary circumstances, an enormous amount of mercury would be required in the centre cell to present a surface proportionate to the surface of the porous diaphragms, the centre of the cell is nearly filled with a block of cement, over which a thin layer of mercury can be run, presenting a large surface without the attendant disadvantages of a large and heavy bath of mercury. The sodium, as it is liberated, rises, by reason of its sp gr, to the top, and there forms an amalgam, which can be run off or used *in situ* for the amalgamation of the plates. There are seven figures to show the parts and general form of the electrolyser and the amalgamator, as well as a combination of the two by means of which the joint processes can be conducted in one apparatus.

Improvements in the Treatment of Bluestone and other Sulphurised Ores. J. C. Butterfield, 13, Victoria-street, S.W. Eng. Pat., 9,057. May 7, 1895

Complex ores of lead, zinc, copper, and iron, technically known as "bluestone," are treated for the recovery of the metals by means of a hot solution of ferric chloride testing 70° to 80° Tw. The ore has to be finely ground so as to pass a 70-mesh sieve In this way the ore is leached, leaving sulphur gangue, and gold if present. The solutions are allowed to stand, so that the last traces of sulphur gangue may settle out, during which process a certain amount of lead chloride deposits On cooling, the rest of the lead chloride comes down. The clear liquid is then run off on to scrap iron to precipitate the copper and antimony The resulting solution of ferrous chloride is run off into a tank specially constructed to withstand the action of the ferrous and ferric chlorides, and is blown with air at 100° to 105° F., at a pressure of 50 lbs to 60 lbs It is essential that this temperature be maintained. The result is the formation of hydrated ferric oxide (and which is subsequently converted into a pigment) and ferric chloride. No oxychloride is formed if the temperature and duration of the blast be duly maintained and prolonged. The oxide is removed by a filter press fitted with asbestos cloths. As much frothing takes place during the blowing, the same is checked by adding half a pint of petroleum to each 500 gallons of solution. The precipitated copper and antimony are recovered by the usual metallurgical methods, special attention being given to the final treatment of gold-bearing antimonious ores, by which the gold (and silver) is concentrated into an auriferous lead fit for cupellation.

Improvements in Ferro-Sodium Fluxes. W. J. May, 105, Gibbon-road, Kingston-on-Thames. Eng Pat., 17,901. Sept. 25, 1895.

Molten steel or iron is run on to beds composed of iron borings and chloride, carbonate, or other salt of sodium as intimately mixed as possible The molten mass is then covered with a sufficient layer of the iron borings and soda salt mixture to extinguish the flames arising from the iron. In this way metallic sodium is liberated, which alloys with the iron. Different qualities of iron require varying proportions of the sodium compound, so that the exact quantities for general use cannot be specified, but must be determined by experiment.

Improvements in or Relating to the Manufacture of a New Product from Sugar, Ferric Oxide, and Chloride of Sodium. C. Stahlschmidt, Burtscheid, near Aix-la-Chapelle, Germany. Eng. Pat., 7,793. April 13, 1896.

Previous combinations of a like nature have been soluble in water, but readily decomposed by acids, or even neutral salts, forming a precipitate soluble only in considerable quantities of acid It is claimed that by preparing the combination in the following way precipitation by salts or acids is avoided:— Twenty-nine or thirty grammes of perchloride of iron are dissolved along with about 600 grammes of sugar in 500 cubic centimetres of water, this solution being heated to 80° or 100° C., and then neutralised with about 640 cc. of a caustic soda lye of 1·0985 specific gravity. As this preparation reacts in a characteristic way it is assumed to be a new and hitherto unknown combination of the ingredients.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for month ending July, 1896, as compared with 1895:—

ALKALI.

Port.	1895.	1896.	1895.	1896.
	Cwts.	Cwts.	£	£
Russia	17,640	18,104	5,771	5,408
Sweden and Norway	11,108	10,974	2,001	2,378
Germany	5,084	8,734	1,308	2,901
Holland	12,828	8,028	2,602	1,934
France	4,441	4,284	1,609	1,466
Spain and Canaries	24,409	27,796	7,314	9,634
Italy	21,349	16,076	6,878	5,027
United States	235,514	136,852	49,342	32,636
Australasia	25,552	18,208	6,764	6,119
British North America	17,731	20,466	4,694	4,262
Other countries	115,935	82,231	32,598	23,947
Total	491,591	351,753	120,881	95,712

BLEACHING POWDER, ETC.

Port.	1895.	1896.	1895.	1896.
	Cwts.	Cwts.	£	£
United States	85,080	52,342	27,926	17,382
Other countries	42,271	34,302	14,695	11,503
Total	127,351	86,644	42,621	28,885

FOREIGN COMPETITION IN THE COLONIES.—During the last fortnight there have been over 1,000 visitors to the London Chamber of Commerce in Eastcheap to inspect the sample collection from the British West Indies of foreign articles which find a sale in those markets, and which were sent home in response to Mr. Chamberlain's despatch to the Colonial Governors It was originally announced that the Exhibition would close last Saturday, but in consequence of the great attention which the samples have attracted and to the fact that the attendance has increased rather than diminished, it was decided to continue the Exhibition until to-day.

MERSEY AND IRWELL JOINT COMMITTEE.

THE usual monthly meeting of this Committee was held at the Board-room, Mosley-street, on Monday, Sir John Hibbert presiding.

THE PROCEEDINGS AGAINST THE MANCHESTER CORPORATION.

Mr. Hulton (clerk) informed the Committee that the summons against the Corporation of Manchester was returnable at the Police Court, Strangeways, on the 16th inst, but he was glad to state that the matter would not then be entered on, as he had received a letter from the Town Clerk intimating that the Corporation would accept an order against them, to be complied with within twelve months

Mr. Killick, on behalf of the Consulting Sub-committee, said this arrangement would be quite satisfactory. There was no desire at all on the part of the sub-committee or the general committee to press the Corporation of Manchester unduly.

THE SHIP CANAL.

Mr Killick stated that a letter had been received from the Lymm Urban Council in the following terms:—"At the last meeting of the Urban District Council I was directed to write and call your attention to the foul condition of the water in the Manchester Ship Canal, and the noxious stench emanating therefrom. The stench is most unhealthy, and the inhabitants are complaining of sore throats, which is attributed to the noisome atmosphere. The value of property is also being seriously depreciated and becoming empty. The Council are fully aware of the difficulties surrounding this matter, but they urge that every available means will be used and taken to abate, with as little delay as possible, the great and offensive nuisance." Mr. Killick added that the sub-committee would of course reply to the Council informing them that the Joint Committee were doing what was possible to abate the nuisance.

MORE "RED TAPE."

With regard to the position of the Royton Urban Council, the sub-committee recommended that the Clerk should be instructed to write to the Local Government Board pointing out that local authorities could, as in the case of Royton, either through error or purposely, by means of technical mistakes, frustrate the action of the Joint Committee, and requesting the Board to deal with the application of the Royton Council as early as possible. In the meantime they recommended that the matter should be adjourned for two months.

The Chairman remarked that there appeared to have been very great delay caused in this matter by the Local Government Board. It would be unfair to blame the local authorities for a fault of the Local Government Board.

Mr. Killick said in this particular case the opinion of the sub-committee was that the delay had been caused more by the local authority than the Local Government Board.

The Chairman thought there had been some red-tapism on the part of the Board.

Dr. Hewit was of opinion that it would be a mistake to give the local authority any extension of time.

The sub-committee's recommendations were adopted.

Reports were also received with reference to the position of other authorities, including the rural councils of Limehurst, Tintwistle, and Glossop Dale, and the urban councils of Hindley, Irlam, Hollingworth, and Droylsden.

SIR HENRY ROSCOE'S REPORT.

A report by Sir Henry Roscoe was submitted dealing with the analysis of fourteen samples from the sewage works of local authorities. Of these seven were good, two fair, and five bad. On the recommendation of the sub-committee it was resolved that the urban councils of Westhoughton, Marple, Astley Bridge, and Moss Side should be communicated with and informed that immediate steps must be taken to improve the effluent from their works

Mr. Hunter asked for further particulars with regard to Moss Side, and was informed by the Chief Inspector that a sample of the effluent was taken from an open brook into which the sewer is turned before reaching the works. In reply to a further inquiry by Mr. Hunter, it was explained that in the case of previous complaints the Moss Side authority had always acknowledged and attended to the representations of the committee.

A WARNING TO PRESTWICH AND BARTON-UPON-IRWELL.

At the last meeting of the Joint Committee the Clerk was instructed to write to the Prestwich Urban Council and the Barton-upon-Irwell Rural Council requesting them to furnish a definite statement as to the time required for putting their respective sewage works into operation. No satisfactory answer having been received from either Council, the committee now resolved that unless a full and definite reply were received before the next meeting of the sub-committee proceedings should be taken against both.

Reports with regard to the effluents discharged by a number of rivate firms were also received and dealt with.

THE MANCHESTER SEWAGE SCHEME.

THE TIDAL SCHEME TO BE ADOPTED.

IN considering the position of the Corporation in regard to the treatment of the sewage of the borough, the city surveyor has considered three methods of dealing with the effluent and the sludge, the former of which is giving trouble on account of its forming a putrefactive mixture with the Ship Canal water. The precipitation works at Davyhulme are adequate and satisfactory so far, but the

EFFLUENT

must be further purified by filtration or otherwise disposed of. The methods which have been considered are:—

(*a*) Treatment by land filtration.
(*b*) Treatment by artificial filters
(*c*) Removal to the tidal waters of the Mersey.

The latter is the method which the surveyor commends, and which the Corporation had under their consideration on Wednesday. We shall, however, take the methods in the order they stand.

Land Filtration.—Opinions vary greatly as to the amount of effluent that can be filtered per acre in a given time, and whatever opinions may be it is certain that the land itself is very variable in its filtering power. In consideration of the severity of the standard of purity adopted by the Mersey and Irwell Joint Committee, the surveyor has calculated on a minimum provision of at least two acres of filtration area per thousand of the population, which means 1,300 acres for Manchester. As there are only 80 acres at Davyhulme this means getting more land. After a search some of the additional 1,220 acres have been found near Carrington, and partly on the Irlam side of the Ship Canal, while the rest is not obtainable without going further away to a plot located between Heatley and Lymm on the south side of the canal, six miles from Davyhulme It would be necessary to convey the surplus effluent to this filtering area by a culvert

"The estimated cost of land, drainage, conduits, laying-out, &c., would be about £550,700. To this must be added the annual cost of working the irrigation areas after crediting a return from crops, such as rye-grass, &c., produced. Judging by the cost of a similar farm at Birmingham, where the works are on the same scale as those now under consideration, this would be about £3,000. per annum" (*vide C.T.J.* 360, p 244, and 480, p. 65)

Artificial Filtration.—Relative to this subject the recent experiments of Mr. Dibdin on coke &c. filters, and a report by Sir H. E. Roscoe of a similar nature, are added as an appendix to the Surveyor's Report. Mr. Dibdin's experiments have been published and criticised *in extenso* in the Journal, No. 423, *et seq*, and as early as possible we shall place on record in these columns the experiments of Sir H. E. Roscoe. On the basis of his report 40 acres of filters are necessary if any provision is to be made for rest, renewal and cleaning. The estimated cost for the construction of a complete set of cinder filters and contingent works is £220,000., to which must be added the annual cost of working the filters, viz, £5,200. which is exclusive of the expense of renewing the filtering medium Coupled to this there is the consideration of the doubts and fears that are rife as to the practical efficiency of the whole scheme when completed.

Conveying to Tidal Waters—Reporting on this scheme the City Surveyor says he "Feels] it incumbent upon him to present to the Rivers Committee an alternative which, in his judgment, is under the circumstances much superior to either land or artificial filtration as described in the previous pages of this report, and he does so with more confidence as the Corporation of Glasgow have recently obtained Parliamentary authority for discharging their effluent into the tidal waters of the Clyde. It is here worthy of note that the Glasgow Corporation constructed works very similar to those at Davyhulme, in 1894, for treating the sewage of a population of 252,000 in the east end of that city. As these works provide for the filtration and aeration of the tank effluent, a deputation, accompanied by the City Surveyor, visited them on the 30th January, 1895, and were then informed that the Corporation contemplated the construction of similar works for the remainder of the City of Glasgow. *The inference to be drawn from the fact that the Corporation of Glasgow have, in the light of experience gained by the actual trial of filtration on an extensive scale, now reverted to the London system of conveying the effluent down to the tidal waters is obvious.* (The italics are ours, ED. *C. T. J.*)

"On the occasion when the Rivers Committee visited the Canal and estuary, the City Surveyor produced a plan showing his proposed alternative scheme, and explained to the Committee how the idea and its many advantages had been brought to his mind when he inspected the district between Davyhulme and the estuary in August and September, 1894, in search of suitable land for effluent purification. He also intimated that on the 14th September, 1894, he had met Mr. Jas. Mansergh, C.E., of Westminster, who had been advising the Committee on the sludge and effluent disposal before the City Surveyor entered upon the duties of his office in July, 1894, and in the Chair-

man's presence explained to Mr. Mansergh the scheme for conveying the effluent to the estuary, when the latter gentleman expressed his general approval, and then went down the Canal to Randall's Sluices with the City Surveyer, and subsequently made certain suggestions for carrying the City Surveyor's proposal into effect.

In the meantime, with a view to giving effect to the contemplated scheme for the discharge of the effluent into the tidal waters, the City Surveyor has examined the estuary and several alternative routes for the requisite effluent conduit, and he is of opinion that the place of discharge and the route shown upon the appended plan are the most suitable. The point recommended for the admission of the effluent to the tidal water is on the south side of the estuary, and is near to Randall's Sluices. The conduit would leave the works at Davyhulme on the south-west side, and would follow approximately the line of the Ship Canal on the south side, passing for the most part through agricultural land, and terminating at a point in the estuary to the north-west of Randall's Sluices, at which place it would be syphoned under the Ship Canal. The total length of conduit would be about 15½ miles.

"This work would be a substitute for the artificial filters previously discussed, and when viewed in that light it will be apparent that if the conduit were large enough to carry off the same volume that the filters could deal with—namely, 26 million gallons per day - it would effect the same purpose. In both cases the excess due to rain would pass into the Ship Canal after being dealt with at Davyhulme Having regard, however, to the nature and permanent character of the work, it would be more satisfactory if the conduit were made of a larger discharging capacity than that mentioned, say of 70 million gallons per day, in which case all the dry-weather sewage, together with the street washings due to rainfalls of ¼ of an inch and less per 24 hours upon the building area of the City, would be carried off after treatment, and the discharge of storm water and sewage effluent into the Ship Canal at Davyhulme would be only of occasional occurrence, and when in a very dilute and inoffensive condition

"The City Surveyor finds from the evidence now before him relating to the London main drainage system that more than 98 per cent. of the total amount of sewage reaching the works will, after purification, be carried off by the conduit he proposes; the remaining fraction would enter the Canal only during periods of very heavy rainfall, when the normal flow of water to the Canal is augmented by large volumes of rain water.

"Upon sanitary grounds, therefore, this scheme clearly has the advantage, whilst the cost would not exceed £258,000. To this sum must be added the estimated annual cost of working the sluices and inspection, which would not exceed £200 per annum. By the adoption of the scheme the sewage problem would be solved once for all; the City Surveyor has therefore every confidence in strongly recommending it for adoption."

To summarise, therefore, the schemes compare in cost as follows :—

Land filtration	£550,700
Artificial filtration	225,200
Tidal scheme	258,200

These figures being inclusive of all charges, whether initial or executive. The balance against the last scheme must, of course, be judged in the light of the prospective efficiency of the two latter schemes.

THE SLUDGE.

The volume of sludge dealt with since the opening of the works has been an increasing quantity owing to the gradual extension of the area of the city connected with the intercepting sewers. The present production may be taken approximately as 50 per cent. of the ultimate quantity. When the whole of the sewers are connected with the main drainage system the amount will be increased to about 510 tons per day, and if allowance be made for a prospective population of 650,000, the ultimate amount of wet sludge would be about 624 tons per day.

The pressing is performed in the following manner :—

A valve is opened at the bottom of the sludge pit, and the sludge is admitted into one or more of the vertical iron sludge rams, which are placed under the press-house, and may be compared to the modern aerated water syphon. When the rams are full of sludge, air under pressure of about 90lbs. per square inch is admitted and forces the contents into the filter presses, which are placed on the first floor of the building. Each press contains 44 ribbed vertical plates, 41 inches square, resting on a horizontal frame, upon which they are free to slide. These plates are covered on both sides with coarse cloth, specially manufactured for the purpose; the sludge under pressure is admitted between the cloths, through which the moisture percolates and passes away to a covered tank by openings at the bottom of the press, the solid portions remaining between the cloths. The presses are opened and closed by hydraulic pressure. Each pressing takes about 55 minutes, and leaves a deposit of cake about an inch and a half in thickness between the covered cloth plates.

The present filter presses, eight in number, produced during the year 1895 an average qnantity of 738 tons of pressed cake per week, at a cost of 2s. 11 9d. per ton of cake produced, equal to 9·7d. per ton of wet sludge The cost of pressing is based upon the returns of the manager. The weight of cake produced by each pressing is about 1¾ tons. The liquid passed off from the presses equals about 50 per cent. of the bulk, or about three-fourths the weight of the wet sludge. This liquid contains a large proportion of polluting matter, and is pumped back to the precipitation tanks for re-treatment. The weight of wet sludge resulting from one million gallons of sewage is about 24 tons, or 6 5 tons of cake, the proportion of wet to pressed sludge having varied between 3 71 to 1 and 3 25 to 1 since the opening of the works in January, 1894. It is difficult to assign any definite reason for this variation in the consistency of the sludge, but it may possibly arise from the admission of trade refuse into the sewerage system through old sewers recently connected. Furnace ashes are at times brought down with the sewage, and the bulk of this material is occasionally so great that it can be separated from the sludge and removed to a tip without pressing. The estimated future production of wet sludge is 624 tons per day, equivalent to 168 tons of cake.

The cakes are dropped from the presses through a hopper into wagons and conveyed to a "tip" formed by the disused bed of the River Mersey, which formerly passed through the works. A proportion of the pressed sludge, amounting to about 17,598 tons per annum, or an average of 40 to 50 tons per day, is at certain periods of the year removed by farmers in the locality.

The "tip" formed by the old river bed will, at the present rate of production be shortly filled up. The council have, therefore, made application to the Local Government Board who have sanctioned the purchase of a steam barge of about 750 tons carrying capacity for the purpose of conveying the sludge in its wet condition to sea, the point of deposit being near to the North-West Light Ship, which is 30 miles from Eastham, as indicated upon the plan appended hereto. The distance between Barton Locks and Eastham is 30 miles. The total journey to the point of deposit and return will therefore be about 120 miles.

It is estimated that the amount of wet sludge produced from the sewage of the present population of 531,000 would be 510 tons per day, or 186,150 tons per annum. For the conveyance of this quantity, a steamer of 750 tons must make 248 trips per annum—approximately one trip in every 36 hours during the entire year This would not admit of a sufficient margin for rest or repairs, and does not allow for prospective increase of population.

If a steamer of somewhat larger carrying capacity—say 1,000 tons—were provided, the above amount of sludge would be removed in 186 trips, or approximately one trip in two days. The use of the existing pressing plant might be continued up to the limit of the demand for the pressed sludge by farmers. This would reduce the number of trips to 140 per annum, or about 12 per month, which would allow of sufficient margin for rest, repairs, &c, and also for increase of population.

The cost of conveying 140,000 tons of sludge to sea would be as follows :—

	£.	s.	d.
One steamer of 1,000 tons capacity, say £18,000. at 7½ per cent.	1,350	0	0
Other works (for conveying sludge from tanks to steamer), £6,250. at 5 per cent.	312	10	0
Wages	1,040	0	0
Insurance	900	0	0
Coal (say)	650	0	0
Repairs	300	0	0
Incidental expenses	150	0	0
Ship Canal charges for a steamer not exceeding 1,000 tons	500	0	0
	£5,202	10	0

Equal to 8·9 pence per ton of wet sludge.

The average cost per trip made by the sludge steamers of the London County Council in 1894 is stated to have been £14. 14s., at which rate the sum to be provided for 140 trips would be £2,058. The provision made in the above estimate for that number of trips (exclusive of Sinking fund and Ship Canal charges) is £3,040., or at the rate of about £21. 15s. per trip.

At present rates the cost of pressing the balance of 46,150 tons (wet), equal to 12,438 tons (pressed), would be £1,860. 10s 4d, bringing up the total cost of sludge disposal to about £7,063 per annum

On the other hand, if the present method of pressing be continued, and the plant extended, the amount not taken by farmers being disposed of on Chat Moss or elsewhere, the total cost would amount to not less than £11,275. per annum, and to this sum must be added the cost of treating the liquor from the sludge presses, an expense which of course would be saved if the wet sludge were sent out to sea

The City surveyor is informed by Admiral Sir George Henry Richards, Acting Conservator of the Mersey, that the regulations ende-

which sludge can be deposited at sea will be the same as those which have been in force for many years with respect to the disposal of the Liverpool town refuse.

These regulations are as under, viz :—

1. The refuse shall be tipped outside the North-West Light Ship at a depth of not less than 15 fathoms. 2 The refuse shall be deposited as near as possible after high water. 3 The masters of the vessels carrying the refuse shall signal by whistle the times of passing the North-West Light Ship, and note the time in the log. 4 Extracts from the logs of the vessels shall be furnished monthly to the Acting Conservator.

The Engineer to the London County Council has kindly supplied the drawings and specification upon which their last new sludge vessel, the s.s. *Burns*, of 1,000 tons, and fitted with all the latest improvements, was built, and has given permission to your City Surveyor to make use of them.

After a long and instructive discussion in the Council on Wednesday, a resolution to the effect "That the report he adopted, and that the Committee be authorised to take the necessary measures to carry the same into effect, with the understanding that a subsequent report be presented by the Rivers Committee on the subject of the cost," was duly passed by 44 votes to 15.

Correspondence.

***We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE MANCHESTER SEWAGE.

(To the Editor of the Chemical Trade Journal.)

Sir,—The Rivers Committee of the Manchester Corporation, who have charge of the sewage of the city, have issued a report in which they state that they find it impossible to prepare an effluent which shall attain to the standard of purity laid down by the Mersey and Irwell Joint Committee at any reasonable cost. Now it seems to me that we have here a curious state of affairs. The consulting chemist to the Rivers Committee is also the chemist to the Joint Committee. In the latter capacity he lays down standards of purity which, to judge from the Rivers Committee's report, it would seem that as their chemist he confesses himself unable to attain in practice on the sewage of a large town like Manchester. It is to be presumed that the Committee in dealing with their sewage have had the benefit of his skill as a chemist. It therefore appears to me that since the Manchester Rivers Committee, with all the skill and experience which they can bring to bear, cannot succeed in attaining the standards of purity laid down by the Joint Committee (and it is well known other sewage committees have the same difficulty), that the standards require revision.

The report of the Committee and of the City Surveyor show that the land filtration of sewage is a practical failure on account of the difficulty of obtaining the needful land, while difficulties are met with in some other systems of filtration. It seems to me, however, that sewage committees strangely neglect mechanical systems of filtration and sludge treatment; they harp too much on land filtration and tank filtration, which are admittedly failures. Why should not attention be given to the use of filter presses, or sewage filtering machines, by means of which good clear effluents are obtainable; the sludge being removed in a form which is decidedly more convenient than that obtainable by any other system, while the cost is rather less than that of any land system.—Yours, &c,

F. C. S.

ADVERTISERS AND COURTESY.

(To the Editor of the Chemical Trade Journal)

Sir,—I beg to call your attention to what I think an unpardonable act of discourtesy on the part of three or four of your recent advertising clients. A young man of my acquaintance has replied to four of the advertisements in your paper during the last two months, sending his testimonials and *a stamped envelope* for reply. In no case have your advertisers been courteous enough to use the envelope or send any reply or to return the testimonials. This does not appear very high-class.—Yours faithfully,

Courtesy.

Selected Correspondence.

SCIENTIFIC EDUCATION IN ENGLAND AND GERMANY.

(To the Editor of The Times)

Sir,—One fact seems to have been overlooked by yourself and your correspondents in dealing with this subject—namely, that there is a by no means small class of manufacturers in this country who have for years recognised the necessity of employing highly trained chemists in their works. This demand, which has existed amongst chemical manufacturers, some of the more prominent dyers and calico printers, had, with few exceptions, to be met by recruiting talent from Germany or Switzerland. Such a course is manifestly open to objections amongst which might be mentioned that foreign chemists will not accept posts in England unless they are much better paid than they would be in their own country, and that, apart from the question of payment, they have a tendency to return to their native country.

Allow me to suggest a few of the main reasons for this lack of well-trained English chemists

1. Money available in this country for higher educational purposes (scientific) is spent in establishing and maintaining a large number of unsatisfactory technical schools, instead of a small number of good colleges. The individual schools are, consequently, often insufficiently equipped, and in most cases the professors are badly paid, the result being that some of the best men refuse to enter the teaching profession at all.

2. There is practically no State aid for higher education, which means that the cost to each individual student is very high. Englishmen or others studying in a German or Swiss University or *polytechnicum* pay only one-third to one half the actual cost of their education, the State in which they are pursuing their studies providing the remainder. It is, therefore, possible for parents to allow their sons to study much longer abroad than in England for the same outlay. In this connection I may mention that to this day many leaders of science and chemical industry in England will send their sons to Germany or Switzerland, or recommend others to do so, if they desire to give their sons the best possible scientific education with the additional benefit of lower cost.

3. The system of higher education in England is based too much on examinations, resulting in insufficient independence of thought of the individual student. On this subject you, sir, and your correspondents have already dwelt.

May I, finally, be allowed to emphasize that the whole system of higher scientific education in England seems to me to have been developed in the wrong direction for several decades. To establish technical schools in every borough of the kingdom may have its advantages, and is possibly an ideal system. But what we want above all is to develop a practical system first, without which the ideal one will prove a chimera. Ask the average chemical manufacturer, be he Englishman, German or Swiss, whether he is anxious his workmen, even his foremen, should know something about science. He will tell you that he wants workmen who carry out his instructions, and that the smattering of doubtful science his workmen may have acquired at the average technical school is worse than useless. What we must strive for is that an Englishmen may have more opportunities of acquiring at home, at reasonable cost, as sound a higher scientific training as he can now obtain abroad. This will enable him to occupy with greater success the leading position as manager in a chemical or similar works, or to further by pure research work the particular industry in which he is engaged. To this end it seems to me of primary importance that the limited funds available for higher scientific education in the United Kingdom be devoted to a relatively small number of the best colleges, say to one each in London, Glasgow, Leeds, Manchester, or Liverpool. This will be productive of infinitely better results than if such available funds be frittered away on a multitude of technical schools, which with the relatively small means at their disposal cannot be equipped and managed otherwise than indifferently.—I am, yours, &c,

Chemical Manufacturer

Manchester, August 28.

(To the Editor of The Times.)

Sir, Every one who has had the opportunity of comparing scientific education in Germany and England will agree with your correspondent, "Chemical Manufacturer," when he suggests that "the funds available for higher scientific education in the United Kingdom be devoted to a relatively small number of the best colleges, say to one each in London, Glasgow, Leeds, Manchester, or Liverpool." As regards London, I have recently pointed out in your columns that the primary factor in the organisatson of a teaching University for London is the concentration of the teaching power of any one faculty in one institution, and that until this fact is recognised no alteration in the character of the examinations will give to London facilities for the higher scientific education comparable to any extent with those obtainable at a German University or *Polytechnicum*. Such organisation of the higher teaching, in the Chemical Faculty especially, is indispensable if English manufacturers are to be supplied with competent English chemists.

But the necessities of the higher education need in no way interfere with the good work which is now being done in our technical schools of secondary grade. These exist in Germany, side by side with the University or *Polytechnicum*, and there are very few large towns where such schools are not found. They are municipal institutions, whilst the high schools, as they are called, are State aided and under State con-

trol. The chemical manufacturer, owing to the special conditions of his industry, seldom appreciates the importance of educating the rank and file of his workpeople. His concern is for the superior officers only. But, although the trained intelligence of his workmen and foremen cannot be even to him a matter of complete indifference, there are many other departments of industry for which the local technical school serves a purpose equally as useful as that of the technical high school in helping the industrial chemist. Indeed, both are necessary parts of any complete system of technical education. Happily, at present, our municipal and county authorities have the funds required for maintaining our secondary technical schools Our colleges for the higher education are worse off. But nowhere is the absence of sufficient means and of proper organisation so keenly felt as in London itself, where separate institutions, each inadequately equipped and with an insufficient professorial staff, are avowedly doing the same work and competing for the same students, who, as your correspondent points out, may find in Germany or Switzerland "the best possible scientific education with the additional benefit of lower cost."—Yours obediently,

PHILIP MAGNUS.

Chilworth, September 2.

(*To the Editor of The Times.*)

SIR,—"Chemical Manufacturer's" letter demands some notice. He says that "foreign chemists will not accept posts in England unless they are much better paid than they would be in their own country." This it not the case. The average pay of the chemists in the great German aniline colour factories largely exceeds anything of the kind paid in England.

It is this very point which Professor Ostwald laboured to expound. The German willingly pays and waits for results, often for years The Englishman expects immediate results, or the departure of the unfortunate chemist.

But the great point is still not perceived by "Chemical Manufacturer." As Carnot organised victory, so the Germans have organised industrial research. With armies of chemists ranging from one hundred downwards, they are able to place a force of thoroughly equipped men in properly furnished laboratories to follow up any line of research likely to yield results - Yours, &c., R. J. FRISWELL, V.P.I.C.

115, Darenth-road, N., Sept. 2.

(*To the Editor of The Times.*)

SIR,—The letters of Professors Ramsay and Ostwald in your issue of August 25 have not provoked much discussion in spite of the challenge thrown out in your leading article of the same date. It would have been interesting to have heard the opinions of English manufacturers as to the advantage or disadvantages of the employment by them of highly trained scientific specialists—German or English—and their comments on the methods of the German factory which employs 78 scientific chemists—a factory which, it ts worth pointing out, pays its shareholders a dividend of 25 per cent. According to Professor Ostwald's reasoning, as I understand it, the system of scientific education in Germany is better than the English system, and hence German manufacturers are ousting those of this country. If this is so, your suggestion that the manufacturers must furnish the driving power for reform is scarcely applicable until, at any rate, they and we have been educated up to it. Scientific education in this country is, I believe, generally admitted to be in a bad state, not so much that it is inferior in method to that of other countries, but rather that, in comparison with classical and mathematical education, it can hardly be said to exist at all. Until our public schools and colleges recognise that science is to take its place in their curriculum on an equal footing with other subjects we cannot expect our manufacturers, saturated at school with Greek and Latin, to recognise the value of scientific research If England's continued prosperity as a manufacturing country depends on the discovery of new scientific methods, then our public schools and Universities hold the key to the position. Give science that freedom in this country which Professor Ostwald so disinterestedly advocates - freedom to be taught and to be learned - and may it not come too late —Yours faithfully, J. E. MARSH.

University Museum, Oxford, September 1.

(*To the Editor of The Times.*)

SIR,—Will you allow me to trespass once more on your valuable space, in view of the great national importance of this subject and the fact that I am the only manufacturer who, as one of your correspondents puts it, has responded to the challenge thrown out in your leading article of August 25?

I am grateful that so high an authority on educational matters as Sir Philip Magnus supports in the main the view I expressed in my first letter. While I admit the justice of his contention that it is a mistake to confuse the municipal technical schools with the State Universities, or "Polytechnica," of Germany, and that each has its separate sphere of influence, I still maintain that available funds in this country should be applied to a few of the latter rather than to a great number of the former. One highly-trained chemist educated at the University will do infinitely more good to the chemical industry of his country than a hundred men who hail from the average municipal technical schools with their imperfect scientific training.

With regard to Mr. R. J. Friswell's letter, I am aware that German chemists are often in receipt of salaries which the average Englishman considers absurdly high. Salaries of £500. to £1,000. per annum are by no means rare; and in some cases salaries, including commissions on inventions, etc., will amount to several thousands, which in the majority of cases are well deserved. Mr. Friswell has not gathered from my letter that the point I wished to emphasize is that the same foreign chemist who would be satisfied to accept a post with a salary of, say, £500. in his own country will require one-third or one-half as much again for a similar post in an English works So far from deserving the reproof of your correspondent that I have missed the point of Professor Ostwald's letter, I may say that several research chemists are employed in my works. But I have to lament the lack of suitable English chemists for the particular branch of the industry I am engaged in.

Letters such as the one addressed to you by Mr. J. E. Marsh cannot fail to be productive of good. Germany owes her splendid chemical industry to her early recognition of the importance of higher scientific education. Good chemists were there available before chemical manufacturers wanted them. Indeed, it may be said that chemists working for the pure love of science were and frequently are the very men whose discoveries are of the most far-reaching consequence to chemical industry.

Lord Beconsfield frequently referred to the close connection between a country's chemical industry and its national prosperity, and with your permisson I should like to conclude my letter with a quotation from a recent article in the *North American Review* which amplifies his views:—

"It is fair to hold that the country which has the best chemists will in the long run be the most prosperous and the most powerful. It will have at the lowest cost the best food, the best manufactured materials, the fewest wastes and unutilised forms of matter, the best guns, the strongest explosives, the most resistant armour. Its inhabitants will make the best use of their country's resources; they will be the most healthy, the most free from disease; they will oppose the least resistance to favourable evolution; they will be the most thrifty and the least dependent on other nations. The education of its people in chemistry and the physical sciences is the most paying investment that a country can make. Competition to-day between nations is essentially a competition in the science and applications of chemistry."—Yours, &c.,

Manchester, Sept. 4th. CHEMICAL MANUFACTURER.

THE CONSUMPTION OF PETROLEUM FOR FUEL.

THE *Shipping and Commercial List* says:—"No official figures on the consumption of petroleum for fuel have been published since the statement presented in these columns on January 17th, 1894. Then it was shown that the Ohio and Indiana oil fields had furnished for fuel purposes 7,000,000 barrels crude in 1890, a trifle over 9,500,000 in 1891, about 11,000,000 in 1892, and 9,000,000 in 1893. The consumption dropped to 8,000,000 barrels in 1894, and last year the total sales of fuel oil were 7,600,000 barrels. Since January 1st the movement of crude for that purpose has continued at about the same ratio. The decline is owing to reduced production and higher prices. In 1892, when connsumption was at its highest point, and producers were pushing the use of oil for fuel, the cost of Lima oil at the wells was 15c. per barrel, in comparison with 72c as the average last year. The decreased yield of Pennsylvania crude compelled refiners to give more consideration to the so-called Lima oil. By improved processes they brought the Ohio refined to perfection, and it is now as acceptable for export as any other grade of petroleum. For that reason much less crude is used for fuel, and unless production should largely increase, the volume of business in fuel oil will continue to decrease so far as the Ohio and Indiana fields are concerned. A different story comes from California, where the production last year was 800,000 barrels, against 400,000 in 1894, half of which was used for fuel and the balance refined. Developments are rapidly increasing the oil wealth of that State, and until the oil is otherwise used, great efforts are being made to push it forward as a fuel. It is now being used in locomotives with success, this feature being taken from Russia. The comparatively new fuel is meeting with favour on the Pacific coast, as it cheapens the cost materially to many industries, and prevents a surplus"

Trade Notes.

The Russian Naphtha Producers' Union.—It is announced from Baku that the agreement between the members of the Naphtha Producers' Union, which expires in October, will not be renewed.

Messrs Brunner, Mond and Company.—At an extraordinary general meeting of the proprietors of the above company, held in Liverpool on Wednesday, a special resolution altering the articles of association so as to permit of the increase of the company's capital to £3,000,000. by the creation of new shares, was unanimously passed.

Serious Fire in Manchester.—A great fire occurred in Chorlton-on-Medlock, Manchester, on Tuesday evening. It broke out on the premises of Messrs. Thomas Kerfoot and Company, essence and flavouring makers and manufacturing chemists, Chester-street, and resulted in the destruction of a six-storey building and its contents. The difficulty of coping with the fire was enhanced by the presence of ether and chloroform in the building. The large works of Messrs. Macintosh and Company also adjoin.

Price's Patent Candle Co., Ltd.—The profit and loss account shows that the balance of profit in hand shown by the accounts laid before the general meeting in March was £63.576, from which has been deducted dividend, 17s 6d. per share, paid March 14; reser e fund, £10,000; and on account of depreciation on fixed properties, £12,500., leaving a balance of £8,264, and adding the profit of the six months to June 30 (less income-tax), £37,827., there is a sum of £46,091. A dividend is now to be declared of 16s. per share, leaving to be carried forward £16,091.

The End of the Chemical and Copper Workers' Union.—On the 3rd inst., the sale of the furniture, billiard table, etc., of the St. Helens Chemical and Copper Workers' Club took place, and this was apparently the beginning of the end locally, as a similar sale took place at Widnes on the 10th inst. These clubs were part of the machinery employed to work the Chemical and Copper Workers' Union of Great Britain and Ireland, an organisation floated some few years ago by Mr P. J. King, who, after a somewhat meteor-like existence on the labour agitation platform, folded his tent like the Arab, and silently passed away.

Fire at a Bleachworks.—Shortly before half-past ten o'clock on Saturday night a fire was discovered by the night watchman to have broken out in the calendering room of Messrs J. B Champion and Co.'s bleachworks, Hollings Vale, near Bury. An alarm was at once raised, and every endeavour made to suppress the outbreak. A quantity of stored cloth was got out of the building, and the Bury fire brigade was sent for. The fire was not got under until shortly before four o'clock on Sunday, several rooms being destroyed. The damage, which is covered by insurance, is variously estimated at from £6,000. to £10,000., and the origin of the outbreak is supposed to be due to friction of machinery.

Aerial Flight of a Locomotive.—Mr. Frederick Harrison, of the London and North-Western Railway, and a party of friends, had a narrow escape from death on Sunday last. They were descending the Pike's Peak Incline Railway, Colorado, when the side bars on the driving wheels of the engine broke, and, striking the air brake, destroyed it. The train started down a grade of about 25 degrees, but the conductor applied the safety brakes, and the car was brought to a standstill. The engine, however, broke loose, whereupon the engineer and fireman jumped from it, thus saving their lives, and the engine dashed down the track at a terrific speed. After traversing about a mile it came upon a curve, but its impetus was so great that it bounded from the line and shot through the air, a distance of 150 feet, clearing a large rock 15 feet high. The engine plunged into the side of the mountain, tearing an immense hole in the earth, and the boiler then exploded, and fragments of iron were sent flying in every direction. The passenger car was stopped at the edge of a high trestle bridge, and its occupants alighted in safety and unhurt.

A Cotton Oil Mill for Shanghai.—It is stated that efforts are being made to establish a cottonseed oil mill at Shanghai. It is the logical result of the cotton mills at Shanghai, and the consequent stimulus given to the cultivation of cotton in China. Since 1890 there have been forty five new manufacturing plants established in Shanghai. They are all in successful operation, especially the cotton factories, in which large capital is invested. The area suitable for cultivation of cotton in China is almost as limitless as the supply of labour, and labour being very cheap there can be no doubt that China will soon be one of the great cotton producing countries of the world, and that this product, produced and manufactured in China, will command serious consideration in all calculations with reference to the cotton market. It will not be safe to discount the cotton of China because it grades low, for it is certain to improve. At present it is estimated there are 1,000,000 tons of cottonseed, equal to 90,000,000 gallons of oil, now yearly lost to commerce, which would find a ready market.

Oil Gas at Greenock.—At the monthly meeting of the Green Police Board, Bailie Mitchell presiding, a report was submitted Mr. Samuel Stewart, manager of the gasworks, as to the cost working of the oil gas process. It stated that the plant had £1,688, to be liquidated from revenue in four years, and that re had amounted to £197. The cost of working over the whole year £3,000. The quantity of oil gas made was 15,606,6:0 cubic fee an illuminating power of over 90 candles. When the foregoing is applied to the workings of the past year it goes to show that has been an advantage arising from the use of the oil process. produce the quantity of gas made last year, 250,484,000 cubic feet probable quantity of coals and cannels required would have been 26,000 tons. At an average price of about 11s. 6d. per ton this give a total cost of £14,950, as compared with an actual outla coals and gas oil, as per financial statement, of £13,726., or £1,200. less.

The Coal Trade Combination.—The *St. James's Gazette* some particulars of the proposed combination of London coal and states:—"It is confidently believed that any possibility of a rivalry between the merchants engaged in the inland coal trade those getting their supplies by water will be obviated by the constit of the new combination. On the other hand, it is held that by joint action the merchants who are promoting this scheme will be to bring pressure on the railway companies which may result reduction of rates—universally considered excessive in the trade—the consequent benefit of the consumer. With respect to the capi the new venture the firms concerned have ample resources, and no need to appeal to the public for any money. But an opport will be given to the customers of the merchants to acquire an int in the business. The capital required is estimated at about £1,000. The combination is in no sense a stock exchange scheme, but is p a business arrangement. The scope of the company is nominally United Kingdom, but operations will practically be centered London. No colliery proprietors are interested in the new ventu another ground for comfort for the uneasy consumer. Whatever ultimate result may be, it is not the ordinary householder who suffer by the proposed amalgamation becoming an actual fact. by a policy of centralisation of reduction in the cost of manage and of increased efficiency in distribution that the coal merchants their profits.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols continue very steady, but there is not so much activity last week. Figures for forward deliveries over long periods are perh a trifle easier than last quoted. With the exception of a slight fir in the forward position carbolic acids are dull, 60% crude stand at 2s. 0d., and 40% crystals at 6¼d. There is a lack of information to any movements in naphthas, the nearest value for crude being 1s. and for solvent 1s. 6d. Creosote and anthracene are exceedingly qu though an improvement in the latter is looked for shortly. Pitch neglected at 31s. to 31s. 6d. f.o.b., East Coast.

Sulphate of ammonia has taken a turn for the worse, the rec betterment having been of a most transitory nature. Various reas are given for the decline at London, but apart from whatever tru worthiness there may be in them, they do not alter the fact that Lon outside makes now figure at £7. 12s. 6d., Liverpool price ranges fr £7. 13s. 9d. to £7. 15s., Hull £7. 10s. 0d., and Leith £7. Beckton is offering at £8. for October-December, and even still furth ahead.

MISCELLANEOUS CHEMICAL MARKET.

Business in the alkali trade is fairly steady. There is no appearan of any improvement in values, and Board of Trade Returns continue show an unsatisfactory record of quantities exported, both in alkali a bleaching powder. Prices of alkali for home trade are steady £3. 7s. 6d., bags, f.o.r., for 58% ammonia alkali, and for caustic so current quotations are as last reported, viz.:—f.o.b. Liverpool, 77 £9. 5s.; 74%, £8. 5s.; 70%, £7. 7s. 6d.; 60%, £6. 7s. 6d. per to 10-ton lots and upwards. Bleaching powder rather easier, both f spot and forward delivery. For contracts over 1897 the price £6 5s. per ton is now quoted, and business done thereat. Chlorat are weak: potash at 4⅜d. and soda 5½d. to 5⅝d per lb. Recovere sulphur £4. 15s., f.o.r.] Sulphate of copper £16. per ton, f.o.b., bein a little easier. Acetates of lime, brown and grey, without change position or value—other acetates quiet and unchanged. Potash, caust and carbonate, continues in good request, and prices are firm. Yello

prussiate of potash lower at 6¼d. per lb.—prussiate of soda 5d. per lb. Sulphocyanides dull, with lower tendency. Nitrate of soda steady at 7s. 10½d. Arsenic £22. 5s., f.o.r. Garston. Aniline oil and salt are firm, with advancing tendency. Trade in carbolic acids is reported quiet, and there is no change in values. Trade generally in chemicals is reported dull from all quarters.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed at 48s. 1d.; Middlesbrough 37s. 8d. cash, and hematite 46s. 11½d. Copper, quiet: Chili bars, G. O. B.'s and G. M. B's., closed at £48 6s. 3d. to £48. 11s. 3d. cash, and £48. 5s. to £48. 10s. three months. Tin, easier but active: Straits closed at £59. 1s. 3d. to £59. 11s. 3d. cash, and £59. 12s. 6d. to £60. 2s. 6d. three months; Australian, £60. to £60. 5s.; English ingots £63. Lead: Spanish, £11. 1s 3d. to £11. 2s. 6d.; English, £11. 5s. Silesian spelter, ordinary, £16. 15s. to £16. 16s. 3d. Nickel 1s. 2½d. Antimony £29. to £29. 10s. Quicksilver: First hands, £6. 10s.; second hands, £6. 9s. *Copper shares*, quiet: Cape, 2⅜ to 2½; Copiapo, 2⅜ to 2½; Libiola, 2¼ to 2½; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 24 7/16 to 24 9/16; Tharsis, 5⅝ to 5⅞.

GLASGOW, WEDNESDAY.—Market flat, with moderate business. Scotch done at 46s. 2d. and 46s. 1½d. cash, also at 46s. 4d. and 46. 3½d. one month; closing with buyers at 46s. 1d. cash, sellers ask 46s. 1½d. Cleveland done at 37s. 10d. cash; closing with buyers at 37s. 8d. cash, sellers ask 37s. 9d. Cumberland hematite closes with buyers at 46s. 11½d. cash, sellers ask 47s. Middlesbrough hematite done at 44s. 9d. cash; closing with buyers at 44s. 8½d. cash, sellers ask 44s. 9d.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Towards the end of the week sulphate of ammonia showed the least little bit as if taking up, and there were a good many buyers willing to do business at £7. 10s. prompt without finding sellers willing to join in, these (or the most of them) holding out for £7. 11s. 3d. Buyers do not see their way to give the higher price, and the Leith value, therefore, stands between the two. There is forward busines to report, at £8. to £8. 2s. 6d. which is more promising than might have been expected. There is no appreciable change in burning oils. Prices, as undernoted, are the agreement ones, but the agreement cannot be reckoned on fully at present, and it is probable that these oils are to be had for less, although not perhaps on the open market. The same applies to the solid paraffin prices here given. Naphtha and lubricants, on the contrary, are firm at their figures. Borax and boracic acid are reported £2. down. The other ordinary chemicals are little changed. Bleach may be a little easier. Sulphur steady, at £4. 15s.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 21s.; borax, English, refined, £18., and boracic acid, £28. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 1½d.; sulphate of ammonia, £7. 10s. to £7. 11s. 3d. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 5s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £4. 15s., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were *nil*.

REPORT ON MANURE MATERIAL.

During the past fortnight the market has remained very quiet in all departments, there being no improvement in any direction.

Quotations for mineral phosphates are unchanged, but owing to the great demand for tonnage for cotton, shippers are experiencing much difficulty in securing freights from southern ports at anything like prices current a month or two ago. Hence there is less anxiety to sell. From Algeria the same difficulty has not arisen and consequently the position is altogether unchanged.

There would be now sellers of River Plate cargoes of bones at £3. 12s 6d. per ton, for Autumn shipment, but buyers do not seem keen at the price. Crushed Kurrachee bones offer at £3. 12s. 6d. per ton, and this price would probably be accepted for Bombay bone meal for shipment.

Nitrate of soda is unchanged, spot price being 7s. 10½d. per cwt. for ordinary, and 8s. for fine quality. Due cargoes are worth 7s. 9d. per cwt.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets are very flat in cotton and linseed oils, the most notable feature being the sudden advance in the rates of rapeseed oil, which has advanced about £3. per ton upon the previous rates. The principal imports up to date have been:—Linseed, 476,317 quarters, against 388,212 quarters a year ago; rapeseed, 69,788 quarters, against 98,362 quarters; cottonseed, 108,543 tons, against 122,246 tons; olive oil, 13,809 casks, against 8,921 casks; rape oil, 2,746 casks, against 5,738 casks; oilcakes, 9,694 tons, against 10,229 tons; tallow, 46,670 cwts., against 9,295 cwts.; turpentine, 11,684 brls., against 14,503 brls. Linseed oil rather easier: Spot quiet at 15s., naked, and September-December quoted 15s. 1½d.; January-April, 15s. 1½d. to 15s. 4½d; boiled and refined, £1. to £2. per ton extra. Export for the week has been 3,160 cwts. Refined cotton oil slow, at 13s. 6d., naked spot; September-October, 13s. 9d., sellers; November-April, 13s. 10½d. Casks £1. and ordinary barrels £1. 10s. per ton extra. Export of refined oil for the week has been 5,020 cwts. Turpentine, 19s. to 19s. 3d. per cwt. Owing to damage to crops, olive oil has every appearance of a substantial advance in prices; a good quality of Malaga oil can still be bought at £30. per tun. Cod oil, £17. to £19. per ton. Castor oil, 2⅞d. to 3d. per lb. for first pressure. Italian olive oil soaps, 60%, £17. 10s per ton, c.i.f. Hull. Belgian oleines, £18 to £21. per ton. Brown Yorkshire grease, £8. to £9. per ton. Boiled siccative oil, £10. 10s. per ton.

CAKES.—Linseed cakes, £4. 7s. 6d. to £5. 12s 6d. per ton. Cottonseed, £3. 12s. 6d. to £4. per ton. Black Sea rape cakes, £2. 10s. to £2. 15s. per ton.

PAINTS.—The sudden break in the weather has somewhat affected the demand in these articles. Prices are: White and red leads unchanged. Ready-mixed paints, in lever tins, £24. Black, blue, green, Venetian red and yellow ochre paints from £11. per ton. Dry mineral colours from £3. to £7. 10s. per ton. Paint remover, 25s. to 30s. per cwt. Imperial black varnish, £5. 10s. per ton, in barrels. Oak varnish 5s. 6d. per gallon.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—There is only a small amount of palm oil offering, but as the demand is very limited, this has not affected prices. There are very small sales being made. There is no change in olive, which continues quiet. Linseed is quiet, 17s. 3d. to 19s. per cwt. being the price for Liverpool makes in export casks, according to quality. Cotton-seed is steady, holders being firm. Liverpool refined is quoted at 15s. 6d. to 16s. per cwt., and American at 16s. to 16s. 6d. per cwt. Castor oil is practically unchanged, prices for good seconds Calcutta and first pressure French remaining as last quoted. Tallow is livelier, with a good inquiry, at full prices. The lower grades of resin are fairly well inquired for, and spot prices for all qualities are maintained, but there is little doing in the finer qualities. Spirits of turpentine are steady and rather firmer at 19s. 3d. to 19s. 6d. spot. Petroleum is quite featureless, and prices are as last quoted, both for Russian and American.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical market remains unchanged, with fair shipments. Soda crystals are quoted £2. 2s 6d. per ton, gross weight, locally. Caustic 76/77% £9., and 70% £7. 10s. to £7. 15s. per ton. Sulphur scarce at £4. 15s. per ton, f.o.b. Tyne. Other products as under:—

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton,

gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6 15s. per ton, nett; do., 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT. South Durham salt unchanged at 9s 6d. per ton, f.o.b. Tees.

COALS are steady, with a good consumption for gas coals. Coke also in excellent demand. To-day's prices as under:—Best Northumbrian steam, 8s. 3d. to 8s. 4½d. per ton; second qualities, 7s. 3d. to 7s. 4½d. per ton. Small steam 3s. 3d. to 3s. 6d. per ton. Gas coals 6s. 6d. to 7s. per ton. Household coals 10s. to 11s. per ton. Coke 15s. to 16s. per ton.

New Companies.

A. E. Taylor & Company, Ltd.—Capital £2,000., in £5 shares. This company has been formed to acquire the business of A. E. Taylor and Company and the Pioneer Oil Company, and to trade as electroplaters, polishers, oil importers, and drysalters.

Robin & Heuston, Ltd.—Capital £50,000., in shares of £10 each, of which 2,500 are preference and 2,500 ordinary. This company has been formed to acquire and carry on the business of soap and candle makers, etc. The subscribers to the memorandum of association are:—J. Houston, Kinning Park, Glasgow, soap and candle maker; R. S. Houston, Paisley, soap and candle maker; C. Houston, Kinning Park, Glasgow, soap and candle maker; C. Allen, Glenalmond, Merchiston, Edinburgh, leather merchant; J. A. Stewar, Dunmorlie, Pollokshields, Glasgow; J. H. Stobo, Kirkfield, Paisley-road, Renfrew, commission agent; J. McIntyre, 20, Sandholes, Paisley, commercial traveller.

Kromfontein Coal Company, Ltd—Capital £80,000., in £1 shares. This company has been formed to carry on the business of coal raisers and coke manufacturers, under an agreement with the Transvaal and Free State Coal Company, Ltd. The subscribers to the memorandum of association are:—G Grant, junr., 11, Dale-street, Liverpool, clerk; G. H. Lewis, 11, Dale-street, Liverpool, clerk; A. T. Griffiths, 11, Dale-street, Liverpool, clerk; E C. Brannigan, 11, Dale-street, Liverpool, clerk; C. E. Johnstone, 11, Dale-street, Liverpool, clerk; F. K. Clarke, 11, Dale-street, Liverpool, clerk; G. W. Trickey, 9, Fenchurch-street, Liverpool, clerk.

Gazette Notice.

BANKRUPTCY ACTS, 1883 and 1890.

Receiving Order.

Eaton, Edward, Macclesfield, drysalter and chemical manufacturer.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending August 29th.

Acetate of Lime—
U. States, 2,070 bgs. H. Wallace & Co

Acetic Acid—
Holland, 119 pkgs. A. & M. Zimmermann
Sweden, 30 Feerst Brs.
Holland, 14 Little & Jamieson

Acetone—
Holland, 20 drs. R. W. Greeff & Co.

Acid—
Belgium, 40 pkgs. Elkan & Co.

Alkali—
France, 10 t. P. Hecker & Co.
Holland, 3 J. Barber & Co.
France, 2 "

Ammonium Chloride—
Holland, 2 cks. H. Lowns

Arsenic—
Germany, 60 kgs. Petri Brs.

Asbestos—
Germany, 4,564 Craven & Co.
Italy, 550 J. Barber & Co.
Canada, 150 W. Byford
" 103 Passmore, Wilcox, & Co.

Barium Chloride—
Germany, 53 cks. Petri Brs.

Barytes—
Holland, 53 cks. O'Hara & Hoar
" 108 W. Harrison & Co.
Germany, 38 bgs. H. Lambert
Belgium, 20 cks. W. Harrison & Co.

Caoutchouc—
Natal, 3 t. Hale & Son
Senegal, 141 Prop. Hay's Wf.
E. W. I., 58 Lewis & Peat
France, 18 H. Johnson & Sons
Natal, 10 Prop. Hall Wf.
France, 38 Burnett Brs. & Sons
Belgium, 3 Stubbs, Wilson & Co.
Chile, 34 L. & I. D. Jt. Co.
Natal, 37 "
France, 34 H. Johnson & Sons
U. States, 4 Williams
" Forrer & Co.
Columbia, 22 Prop. Hall Wf.
Japan, 53 Elkan & Co.

Castor Oil—
E. Indies, 31 cks. Ross & Dowling

Caustic Potash—
Germany, 335 t. J. M. Steel & Co.
France, 80 J. W. Bush & Co.
" 12 drs. Macdougall & Co.
Canada, 13 bds. Charles & Fox
Belgium, 5 Petri Brs.

Chemicals (*otherwise unenu.*)—
Germany, £83 Phillipps & Graves
France, 83 Burnett Brs. & Sons
Holland, 5 G. Rahn & Co.
Belgium, 12 Société John Cockerill
Germany, 80 Feerst Brs.
" 478 A. & M. Zimmermann
Holland, 10 T. H. Lee
Germany, 280 H. Lambert
" 3 Petri Brs.
Holland, 7 Phillipps & Graves
Germany, 50 Société John Cockerill
" 604 T. H. Lee
France, 36 Flageollet & Co.
" 4 Prop. Hay's Wf.
U. States, 474 C. Loch
" 2,917 A. Lawrence

Cream of Tartar—
Spain, 11 cks. R. & F. Wf. Co.
France, 53 "
Holland, 38 Kirkpatrick & Co.
France, 1 Vokins & Co.
" 1 G. S. N. Co.

Cresylic Acid—
Germany, 30 pks. J. G. Black

Dyestuffs—
Cochineal
Canaries, 19 bgs. G. S. Bruce & Co.
" 28 Bore & Sauvenier
" 19 W. M. Smith & Sons
Cutch
Rangoon, 130 bxs. Hoare, Wilson & Co.
Ceylon, 300 Cayser, Irvine & Co.
Divi Divi
E. Indies, 44 bgs. Flack, Chandler & Co.
Extracts
Germany, 29 bels. Brenner, Bennett & Co.
Denmark, 1 ck. Sorensen & Co.
U. States, 130 bxs. Skilbeck Brs.
France, 110 pkgs. Burnett S. S. Co.
Gambier
Singapore, 883 bls. Brown & Ellerslie
" 2,680 Adamson, Gillilan & Co.
" 50 Hicks, Nash & Co.
" 165 bgs. S. Barrow & Brs.
Indigo
E. Indies, 19 cks. P. Macfadyen & Co.
" 6 L. & I. D. Jt. Co.
" 2 Arbuthnot, Latham & Co.
Germany, 11 L. & I. D. Jt. Co.
France, 13 "
Portugal, 4 Croysdale & Co.
Brimfini. 7 L. & I. D. Jt. Co.
Myrabolams
E. Indies, 357 bgs. Hoare, Wilson & Co.
Saffron
Italy, 1 cs. J. Knill & Co.
Shumac
Italy, 50 bgs. Heilyer & Co.
" 25 W. H. Mitchell
Tanners' Bark
Adelaide, 6 t. Devitt & Hett
" 179 Beresford & Co.
Natal, 4 J. T. Rennie, Son & Co.
Adelaide, 8 J. Greig
" 87 Dyster, Nalder & Co.
" 31 Baxter & Hoare
Auckland, 78 Escombe Brs.
" 11 Souratty & Co.
Valonia
A. Turkey, 289 t. A. & W. Nesbitt
" 52 Hicks, Nash & Co.
France, 8 bgs. M. M. de France
A. Turkey, 8 M. D. Co.
" 50 Boutcher, Mortimore & Co.

Farina—
U. States, 300 bgs. Seaward Brs.
Germany, 50 F. W. Harrison
" 50 Dunlop Brs.
Holland, 50 "
" 50 J. Knill & Co.
" 50 H. Lowns
" 100 J. Barber & Co.
" 130 R. G. Hall & Co.

Glucose—
Germany, 23 pks. 136 c. Bennett S. S. Co.
U. States, 500 500 c. R. G. Hall & Co.
" 280 1,580 Page, Son & East
Germany, 15 130 J. Knill & Co.
" 2 10 J. Barber & Co.
" 250 250 G. Clark & Sons
" 50 380 R. G. Hall & Co.
" 280 1,680 Page, Son & East
" 50 300 Fellows, Morton & Co.
" 250 250 C. S Lovell
" 447 2,682 Bellamy & Co
" 75 430 Falkenberg & Hesse
Holland, 100 180 J. Barber & Co
Germany, 6 50 T. H. Lee
Infusorial Earth—
Germany, £131 A. Haacke

Lamp Black—
U. States, 355 brls. L. & I. D. Jt. Co.
Lead Acetate—
Germany, 16 cks. A W. Greeff & Co.
" 40 F. Boehn
Lithopone—
Holland, 20 cks. Taylor Brs.
Magnesia—
Holland, 5 cs. A. & M. Zimmermann
Manure (*otherwise undescribed*)—
Adelaide, 2 t. Bigland, Ltd.
Methyl Alcohol—
Belgium, 11 drs. J. Harrison
Mica—
Calcutta, 170 cs. Wrightson & Son
" £270 E. Davies & Co.
France, 40 W. Hamshar & Co
Ochre—
Spain, 30 cks. 100 bgs. J. L. Lyon & Co.
France, 119 W. Harrison & Co.
" 9 Burnett Brs. & Sons
Holland, 14 pks. Phillipps & Graves
Paraffin—
Sydney, 16 brls. Taylor Brs.
U. States, 113 Palmer & Co.
" 3,579 Anglo-American Oil Co.
Phosphate Rock—
Belgium, 195 t. West & Penrose
France, 273 A. Hunter & Co.
Amba, 440 C. M Esser
E. Indies, 50 Fox, Roy, & Co.
Pitch—
France, 60 brls. H. Hill & Sons
U. States, 33 Dunsch Brs. & Co.
Plaster of Paris—
France, £104 Burnett Brs. & Sons
Potassium Bicarbonate—
Holland, 21 cks. A. & M. Zimmermann
Potassium Carbonate—
France, 185 c. Petri Brs.
" 330 Charles & Fox
Germany, 630 W. G. Blagden
Potassium Chloride—
Holland, 16 cks. H. Johnson & Sons
Potassium Cyanide—
Holland, 45 cs. P. Heydemann
Potassium Sulphate—
Germany, 100 bgs. A. Zumbeck & Co.
Saltpetre—
Calcutta, 441 bgs. Arracan & Co.
" 638 L. & I. D. Jt. Co.
" 296 Lucas & Spencer's Wf.
Germany, 90 P. Hecker & Co.
Holland, 20 cks. Petri Brs.
Soda Alkali—
Holland, 200 t. R. Wallis

ium Acetate—
olland, 10 t. 29 cks. H. Lorenz
ium Bichromate—
rmany, 50 cks. Perkins & Homer
ium Hyposulphite—
olland, 29 cks. J. Owen
ium Nitrate—
ltal, 5,255 bgs. Anglo-Contl. G. Co.
vent Naphtha—
States, 61 brls. Blagden, Waugh, & Co.
rch—
rmany, 1,390 cs. Horne & Co.
olland, 330 Little & Johnston
lgium, 264 F. Claydon & Co.
,, 320 Fellows, Morton, & Co.
,, 50 Leach & Co.
,, 200 Taylor Brs.
olland, 575 E. & T. Pink
,, 50 Phillipps & Graves
,, 7 pks Pickford & Co.
lgium, 120 140 bxs. T. H. Lee
olland, 1,450 Little & Johnston
lgium, 760 E. & T. Pink
olland, 670 A. Starck
States, 200 bgs. B. Warner & Co.
,, 60 brls. Beck & Pollitzer
arine—
Turkey, 510 sks. H. Hehl
lgium, 38 bgs. H. Hill & Sons
,, 80 Walbaum & Tosetti
olland, 51 brls. J. Owen
,, 51 Mordaunt Brs.
taric Acid—
olland, 20 pks. Kirkpatrick & Co.
indisi, 10 F. C. Devon & Co.
,, 14 W. M. Smith & Sons
,, 1 Gregory & Co.
rance, 47 B. & F. Wf. Co.
olland, 4 City Coml. Wf.
,, 8 B. & F. Wf. Co.
ramarine—
olland, 26 cks. 10 cs. Hernu, Peron, & Co.
lgium, 11 pks. W. Harrison & Co.
nish—
rmany, 2 pks. T. H. Lee
States, 7 Dawson Brs.
ance, 2 Flageollet & Co.
States, 5 Allan Brs & Co.
ite Lead—
olland, 50 cks. Spies Brs. & Co.
ance, 19 J. Watt & Son
olland, 24 A. Zumbeck & Co.
rmany, 40 Randall Bros.
lgium, 20 J. L. Lyon & Co.
rmany, 19 D. Storer & Sons
,, 20 pks. H. Johnson & Sons
lgium, 20 cks. Perkins & Homer
c Oxide—
olland, 25 brls. M. Ashby, Ltd.
,, 20 cks. G. Rahn & Co.
rmany, 50 R. W. Greeff & Co.
olland, 25 brls. M. Ashby Ltd.
,, 50 cks. J. Matton

LIVERPOOL.

Week ending August 27th.

rytes—
otterdam, 20 cks.
ne Ash—
Ayres, 1,787 bgs. W. B. Dickinson
,, 24 bgs. H. Brown
ne Meal—
ombay, 1,000 bgs.
rax—
alparaiso, 200 sks. A. & S. Henry & Co.
,, 1,870
ollendo, 598 ,,
,, 1,200 1,075 bgs.
utchouc—
ollendo, 84 bls. J. H. Schroeder & Co.
tor Oil—
alcutta, 249 cs.
,, 2,213 Ralli Brs.
arseilles, 21 brls. J. J. Mack & Sons
,, 29 692
d Oil—
t. John, N'fld., 4 cks. J. J. Langley
,, 43 Harrington & White
lours—
otterdam, 4 cks.
tonseed Oil—
ew York, 50 brls.

Cream of Tartar—
Marseilles, 4 cks.
Dyestuffs—
Cochineal
Las Palmas, 25 bgs. Kennedy & Moon
,, 3 S. L. Behrens & Co.
Fustic
Trieste, 10 t. Fratelle Levy Successors
Savanilla, 936 logs G. H. Muller & Co.
Trieste, 2
Gambier
Singapore, 1,376 bgs. 3,550 bls.
Madder
Larnaca, 4 bls.
Myrabolams
Bombay, 990 bgs. E. D. Sassoon & Co.
,, 2 Ralli Brs.
Shumac
Palermo, 840 bgs. Bk. Brit. North America
Valonia
Smyrna, 52 t. 159 bgs. Barry Brs.
,, 206 Essayan & Co.
,, 26
Patras, 622
Alike, 687 Papayanni & Jeremias
,, 792 C. G. Papayanni & Co.
Patras, 250 A. Xepoletedes & Co.
Farina—
Hamburg, 1,180 bgs. H. Tyrer & Co.
Gelatine—
B. Ayres, 3 cs.
Glucose—
New York, 200 brls.
Glue—
Boston, 3 pks.
Rotterdam, 3 cks. 200 bgs.
St. Nazaire, 19
Iodine—
Valparaiso 73 brls. A. Gibbs & Sons
Manganese—
Calcutta, 200 t.
Manganese Ore—
Coquimbo, 1,000 t.
Manure—
Hamburg, 2 bgs.
Minium—
Rotterdam, 41 cks.
Ochre—
Marseilles, 98 brls.
Paint—
Boston, 15 cs.
Painters' Black—
Rotterdam, 1 cs. 2 tubs
Paraffin Scale—
Baltimore, 100 brls.
Philadelphia, 81
Phosphate Rock—
Coosaw, 3,300 t. United Alkali Co.
,, 440 J. Ashworth & Sons
Pyrites—
Huelva, 4,175 t. Matheson & Co.
Rosin—
Savannah, Ga., 4,050 brls.
Boston, 500
Baltimore, 600
Savannah, 4,600
Saltpetre—
Calcutta, 970 bgs.
Hamburg, 4 cks. 100 kgs.
Calcutta, 5,881 Ralli Brs.
Soap—
Newport News, 170 brls.
Marseilles, 287 cs.
Soapstone—
Genoa, 200 bgs. W. Harrison & Co.
Starch—
New York, 100 bgs.
Boston, 200 bxs.
Baltimore, 100 200 sks.
Hamburg, 128 cs.
Rotterdam, 60
Stearine—
Antwerp, 5 bgs.
Talc—
Trieste, 30 bgs.
Tallow—
New York, 74 hds.
Boston, 2,222 tcs.
B. Ayres, 140 pps. London & Brazil Bank
,, 140 300 cks. 1 hf-pp.
Philadelphia, 39 tcs.
Tartar—
Bordeaux, 20 cks.
Valparaiso, 8 sks. Betteley & Co.
,, 25
Tartaric Acid—
Marseilles, 7 cs.
Varnish—
Rotterdam, 2 cks.
Waste Salt—
Hamburg, 600 . 1,003 bgs.
,, 156 cks. H. Tyrer & Co.
White Lead—
Rotterdam, 11 cks. J. Mathews & Co.
20
Wood Pulp—
Frederikshald, 3,280 bls. H. Tyrer & Co.
Sannesund, 4964
Quebec, 503 ps.
Drammen, 3,730 ,,
Zinc Oxide—
Antwerp, 10 brls.
Zinc White—
Rotterdam, 10 cks.
Hamburg, 40 H. Tyrer & Co.

MANCHESTER.

Week ending August 29th.

Acetate of Lime—
New York, 1,611 bgs.
Acetic Acid—
Rotterdam, 69 cbys.
Alizarine—
Rotterdam, 96 cks.
Alumina Sulphate—
Rotterdam, 39 cks.
Aniline Oil—
Rotterdam, 2 cks.
Barytes—
Rotterdam, 50 bgs.
Bone Ash—
Rio Grande Do Sul, 173 t. Haycroft & Pethick
Boracic Acid—
Hamburg, 4 cks.
Chemicals *(otherwise undescribed)*
Rouen, 50 cks.
Chrome Alum—
Hamburg, 9 cks.
Colours—
Boulogne, 23 cks. 1 cs.
Rotterdam, 42 50 17 bxs 185 brls.
Paris, 2
Cream of Tartar—
Rotterdam, 20 pks.
Dyestuffs *(otherwise undescribed)*
Rouen, 5 cks.
Farina—
Hamburg, 100 bgs.
Gelatine—
Rouen, 10 cs.
Glucose—
New York, 50 brls.
Rotterdam, 10 kgs.
Glue—
Rouen, 28 cks. 27 bls.
Rotterdam, 110 bgs. 5 brls.
Boulogne, 1 cs.
Hamburg, 2 20 bsks.
Antwerp, 10 bls.
Indigo—
Rotterdam, 1 cht.
Logwood—
Progresso, 465 t.
Laguna, 410
Naphthaline—
Antwerp, 5 bgs.
Paraffin Scale—
New York, 900 brls. Anglo-American Oil Co., Ld
Potash—
Rotterdam, 4 cks.
Potassium Muriate—
Hamburg, 5 cks.
Saltpetre—
Hamburg, 1 ck. 20 kgs.
Soap—
Boulogne, 1 ck.
Soot—
Rotterdam, 6 cks.
Starch—
New York, 200 bgs.
Hamburg, 160 cs.
Rotterdam, 115 32 bxs.
Antwerp, 40
Stearine—
Antwerp, 7 bls.
Sulphuric Acid—
Rotterdam, 10 dms.
Tartar—
Bordeaux, 2 cks. J. & P. Hutchison
Tartaric Acid—
Rotterdam, 32 cks. 20 kgs.
Tin Chloride—
Hamburg, 10 cs.
Ultramarine—
Rotterdam, 2 cks.
Waste Salt—
Hamburg, 780 bgs. and qty.
Wood Pulp—
Hamburg, 31 bls.
Gothenburg, 332 bgs.
Drontheim, 4,000 Manchester Ship Canal Co.
Hom'elviken, 5,432 W. Gallagher & Son
Wood Spirit—
Hamburg, 8 dms.
Zinc Oxide—
Antwerp, 30 brls.

HULL.

Week ending August 29th.

Acetic Acid—
Rotterdam, 54 blns. Hutchinson & Son
Albumen—
Riga, 15 cs. Wilson, Sons, & Co., Ld.
Antimony—
Leghorn, 40 cks. Wilson, Sons, & Co., Ld.
Asbestos—
Genoa, 20 bls.
Barytes—
Antwerp, 79 cks. Bailey & Leetham
,, 100 bgs. 212 H. F. Pudsey
Rotterdam, 55 bgs. 46 cks. Hutchinson & Son
Amsterdam, 42 ,,
Antwerp, 200 bgs. Wilson, Sons, & Co., Ld.
Bone Ash—
Monte Video, 678 t.
Camphor—
Hamburg, 1 brl. Wilson, Sons, & Co., Ld.
Castor Oil—
Leghorn, 20 cs. Wilson, Sons, & Co., Ld.
Genoa, 50 ,,
Marseilles, 141 pks.
Chemicals *(otherwise undescribed)*
N. York, 6 cks.
Leghorn, 18 Wilson, Sons, & Co., Ld.
Marseilles, 5 ,,
Bremen, 4 kgs. 5 cs. Veltmann & Co.
,, 1 ck. 1 Patent Lithographic Zinc Plate Co.
Antwerp, 120 brls. Wilson, Sons, & Co., Ld.
Dunkirk, 33 pks. ,,
,, 51
Hamburg, 8 brls.
Colours—
Ghent, 16 brls. Wilson, Sons, & Co., Ld.
Riga, 110 cks. ,,
Antwerp, 14 brls. ,,
Rotterdam, 100 cks. 16 cs. W.& C.L. Ringrose
Cream of Tartar—
Rotterdam, 2 cks. Hutchinson & Son

Dextrine—
Stettin, 5 bgs. Wilson, Sons, & Co., Ld.

Farina—
Harlingen, 285 bgs. W. & C. L. Ringrose
Ghent, 20 Wilson Sons, & Co , Ld.
Stettin, 506 ,,

Glucose—
New York, 150 brls. Wilson, Sons, & Co., Ld.
,, 75
Rotterdam, 60 bgs. Hutchinson & Son

Glue—
Rotterdam, 6 cks. W. & C. L. Ringrose
Antwerp, 2 Bailey & Leetham
Hamburg, 25 bgs. ,,
Dunkirk, 9 bls. 35 cks. Wilson, Sons, & Co , Ld.

Kaolin—
Amsterdam, 20 cks. Reckitt & Sons

Lamp Black—
New York, 4 cs. Wilson, Sons, & Co., Ld.

Madder—
Rotterdam, 1 ck. Hutchinson & Son

Ochre—
Marseilles, 88 cks.

Paint—
New York, 2 cs. Wilson, Sons, & Co., Ld.

Pitch—
Archangel, 650 cks.
Amsterdam, 13 W. & C. L. Ringrose

Plumbago—
Hamburg, 30 cks. Wilson, Sons, & Co., Ld.

Pumice Stone—
Rotterdam, 5 cs. Hutchinson & Son
Leghorn, 20 bgs. 18 pks. Wilson, Sons, & Co., Ld.

Rosin—
Brunswick, 1,750 brls.

Saltpetre—
Hamburg, 10 kgs. Wilson, Sons, & Co., Ld.

Soap—
New York, 700 bxs.
Marseilles, 13 cs. Wilson, Sons, & Co., Ld

Starch—
Ghent, 480 bxs. Wilson, Sons, & Co., Ld.
Bremen, 1,528 cs. Veltmann & Co.
Amsterdam, 20 W. & C.L. Ringrose

Stearine—
Antwerp, 18 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Boston, 50 tcs. 100 brls. Wilson, Sons, & Co., Ld
Dunkirk, 35 cks. ,,

Tar—
Archangel, 4,435 brls
Ulealburg, 1,300 J. Good & Sons

Tar Oil—
Rotterdam, 10 cks. Hutchinson & Son
Archangel, 50 brls.

Tartar—
Naples, 21 cks. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Rotterdam, 10 cks Hutchinson & Son

Treacle—
New York, 1,398 brls. Wilson, Sons, & Co., Ld.
,, 26
Boston, 540 ,,

Turpentine—
Brunswick, 243 brls.

Varnish—
New York, 23 cs. Wilson, Sons, & Co., Ld.
,, 8 pks.

White Lead—
Antwerp, 9 cks. Bailey & Leetham
Rotterdam, 58 Hutchinson & Son
Amsterdam, 24 ,,
Rotterdam, 50 W. & C. L. Ringrose
Amsterdam, 46 ,,

Wood Pulp—
Stettin, 80 pks. Wilson, Sons, & Co. Ld.
Hamburg, 40 Bailey & Leetham
Helsingfors, 36 bls. J. Good & Sons

Zinc Ashes—
Amsterdam, 6 cks. Hutchinson & Son

Zinc Oxide—
Rotterdam, 10 cks. Hutchinson & Son

Zinc White—
Helsingfors, 12 cks J. Good & Sons

GLASGOW.

Week ending September 3rd.

Acetate of Lime—
Philadelphia, 2,795 bgs.

Alizarine—
Rotterdam, 14 brls. J. Rankine & Son
,, 215 pks.

Aniline—
Rotterdam, 7 cks. 6 cs. J. Rankine & Son

Barytes—
Rotterdam, 66 cks. J. Rankine & Son
,, 46 pks.

Castor Oil—
[illegible] 141 cks.

Chrome Alum—
Rotterdam, 15 brls. J. Rankine & Son

Colours—
Hamburg, 2 cks.

Cream of Tartar—
Barcelona, 10 cks.

Dyestuffs—
Cutch
Rotterdam, 100 cs.
Rangoon, 550 bxs. P. Henderson & Co.
Dyewood Extract
—— 80 bxs.
Antwerp, 3 cks.
Valonia
Smyrna, 500 t.

Farina—
Delfszyhl, 200 bgs.

Glucose—
—— 350 brls.
New York, 1,048

Glue—
Hamburg, 5 cks.

Lactic Acid—
Boston, 8 brls. 3 kgs.
Rotterdam, 4 cs. J. Rankine & Son

Manganese Chloride—
Rotterdam, 6 cakes J. Rankine & Son

Paraffin Scale—
Philadelphia, 256 brls.
Rangoon, 644 bxs. P. Henderson & Co.

Potash—
Rotterdam, 53 cks. J. Rankine & Son

Potassium Oxalate—
Rotterdam, 10 cks. J. Rankine & Son

Pyrites—
Huelva, 1,900 t. Tharsis Co.

Rosin—
—— 750 brls.
New York, 500

Soap—
Boston, 3 cs.
—— 323 brls.
New York, 2,500 bxs.

Soda—
Hamburg, 5 cks.

Starch—
—— 1 bx.
New York, 1,925 sks. 900 bxs.

Tallow—
—— 30 trcs.

Tartar Emetic—
Hamburg, 7 cks.

Ultramarine—
Rotterdam, 3 cks. J. Rankine & Son

Varnish—
—— 12 brls.

Waste Salt—
Hamburg, 142 t. 275 cks. 1,913 bgs.

White Lead—
Rotterdam, 6 cks. J. Rankine & Son

Wood Pulp—
Drontheim, 40 bls.
Christiania, 1,226 81 cs.
Hamburg, 101

Zinc White—
Rotterdam, 160 cks. J. Rankine & Son

TYNE.

Week ending August 29th.

Acids—
Antwerp, 10 cs. Tyne S. S. Co.

Ammonium Chloride—
Hamburg, 1 ck. Tyne S. S. Co.

Barytes—
Antwerp, 400 bgs. Tyne S. S. Co.

Castor Oil—
Antwerp, 56 brls. Tyne S. S. Co.

Cod Oil—
Trondhjeim, 2 brls.

Colours—
Antwerp, 1 ck. Tyne S. S. Co

Farina—
Antwerp, 5 bgs. Tyne S. S. Co

Lead Acetate—
Hamburg, 3 cks. Tyne S. S. Co.

Limestone—
Antwerp, 4 crts. 1 blk. Tyne S. S. Co.

Saltpetre—
Hamburg, 21 cks. Tyne S. S. Co.

Soap—
Rotterdam, 11 cs. Tyne S. S. Co.

Starch—
Antwerp, 188 cs. Tyne S. S. Co.

Tartaric Acid—
Rotterdam, 8 cks. Tyne S. S. Co.

White Lead—
Antwerp, 20 cks. Tyne S. S

Wood Pulp—
Christiania, 525 bls.

Zinc Oxide—
Antwerp, 8 brls. Tyne S. S

GOOLE.

Week ending August 26th

Alizarine—
Rotterdam, 9 cks.

Aniline—
Rotterdam, 259 cks. 46 cs.
Ghent, 10 2

Antimony—
Boulogne, 9 cks.

Barytes—
Rotterdam, 25 cks

Caoutchouc—
Boulogne, 8 cks. 8 cs.

Chemicals (*otherwise unc[illegible]*)
Hamburg, 8 cs.

Colours—
Hamburg, 3 cs.

Dyestuffs (*otherwise unc[illegible]*)
Boulogne, 33 cks. 5 cs. 4 pk

Farina—
Hamburg, 100 bgs.
Delfszyhl, 200

Glucose—
Hamburg, 6 cks.

Glue—
Rotterdam, 10 bgs.
Boulogne, 2 cks.
Rouen, 8

Logwood—
Belize, 353 t.

Naphthylamine—
Rotterdam, 12 cks.

Pitch—
Rotterdam, 33 cks.

Potash—
Hamburg, 10 cks.
Dunkirk, 29 20 cbns.

Saltpetre—
Hamburg, 2 cks.
Rotterdam, 100 bgs.

Soap—
Rotterdam, 5 cs.

Starch—
Ghent, 101 cs.

Stearine—
Antwerp, 25 bgs.

Waste Salt—
Hamburg, 1,668 cks. 492 bgs.

Wood Pulp—
Rotterdam, 127 bls.

GRIMSBY.

Week ending August 29th.

Albumen—
Hamburg, 3 cs.

Caoutchouc—
Hamburg, 2 cs.
Antwerp, 5

Chemicals (*otherwise unc[illegible]*)
Hamburg, 1 ck. 2 cs. 21 pks.

Colours—
Hamburg, 24 cks. 4 cs. 42 pks.
Rotterdam, 5 2
Antwerp, 18 42

Plumbago—
Hamburg, 1 ck.

Starch—
Antwerp, 20 cs.

Varnish—
Hamburg, 1 ck.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 2nd.

Alum—
B. Ayres, 41 18 c. £[illegible]

Ammonia (Liquid)—
Rotterdam, 50 dms. £[illegible]

Cologne, 8 clyndrs. 73
Verdigen, 25 235

Ammonium Chloride—
Antwerp, 4 cks. £22

Ammonium Nitrate—
Hamburg, 2 cks. £37

Ammonium Sulphate—
Rouen, 55 t. £340
Antwerp, 130 1,040

Basic Slag—
Cape Town, 69 t. 13 c. £136

Borax—
Rockhampton, 2 cks.

Carbolic Acid—
Rotterdam, 21 cks.

Carbon Bisulphide—
Hamburg, 33 drs.

nic Acid Gas—

eaux,	11 tubes		£22
y,	5		16

ic Soda—

ourne,	11 c.		£27
town,	5 t. 10		40
Bay,	2 15		65
ide,	12 12		90
rne,	5 cs.		15

icals *(otherwise undescribed)*

ay,	10 kgs.		£53
burg,	5 t.		200
rara,	9 11 c.		36
rdam,	7 16	4 dms.	115
ndon,	22 pkgs.		37
irk,	5 35 cks.		600

Acid—

etersburg,	8 cks.		£252
land,		3 kgs.	19
ay, 2 cs.			16
e Janeiro,	5		35
ey,	20 c.		129
tiania,	1		32
o,		5	32
real,	6		33
erp,	5		31
ndria,	10		63
els,		6	36
ngton,	2		15
burg,	4		128

Products—

zarine

etersburg,	6 cs.	£297
eaux,	8 cks.	220

iline Oil

t,	11 cks.	£310

iline Salts

t,	10 brls.	£90

nzol

rdam,	7 pns.	48 rns.	£507

osote Oil

dad,	140 brls.	£85

osote Salts

delphia,	584 bgs.	£110

phtha

gue,	48 cks.	£160
rt,	54	134

phthaline

,	2 cks.	£12
eilles,	50 bgs	36

ro-naphthaline

els,	3 cks.	£23

raffin Wax

in,	25 brls.	£26

ch

hama,	50 brls.	£4
a,	50	17
port,	375	315
York,	200	122
erp,	1,057	1,870

ridine

rdam,	12 cks.	£136
erdam,	12	124

r

a Bay,	70 drs.	£11
i,	50	12

er Sulphate—

,	13 t.	£227

n of Tartar—

ington,	1 t.	6 c.	£122
ey,	10		47
sville Towers,	1 tank		64
din,	10 cs.		48

fectants—

ras,	50 drs.	£50
ston,	60	48
ng,	105 pkgs.	77
burg,	55 cks.	275

re *(otherwise undescribed)—*

en	27 t. 5 c.		£95
edin,	185		2,500
ingen,	603 bgs.		190
ey,	150		335

l Ash—

ondon,	7 cks.	£6

phate—

ort,	10 t.	£65

phorus—

ington	3 cs.	£31
ourne,	3	31
erdam	1	14
Elizabeth,	5	48

sh—

ington,	19 c.	£46

sh Crystals—

onto,	9 pkgs.	£30

Potassium Cyanide—

Townsville,	56 cs.	£679
Adelaide,	20	254
Fremantle,	20	254

Prussiate of Potash—

Antwerp,	24 cks.	£392

Salammoniac—

Constantinople,	23 brls		£88
B. Ayres,		2 cks.	13
Samsoun,	10		34
Varna,		15 c.	25

Saltpetre—

Melbourne,	1 t.		£24
Santander,	1	5 c.	28
Oporto,	1	2	23
Rio de Janeiro,	4	10	101
Rockhampton,	8 cks.		45

Sheep Dip—

Sydney,	15 cks.		£63
Pt. Elizabeth,	3 t.		65
Napier,	2	3 c.	75
B. Ayres,	16	6	467

Soda Crystals—

Sydney,	3 t.	11 c.	£9
Demerara,	10 brls.		5

Soda Salts—

New York,	7 t.	16 c.	£120

Sodium—

Hamburg,	20 cs.		£442

Sodium Bicarbonate—

Rio de Janeiro,		5 c.	£5
Townsville Towers,		11	7

Sodium Hyposulphite—

Jamaica,		10 c.	£7

Sodium Silicate—

Greytown,	2 t.	17 c.	£10

Sodium Sulphate—

Ghent,	50 t.		£75

Sulphate of Lime—

E. London,	12 cks.		£37

Sulphur—

Trinidad,	41 pkgs.			£70
Demerara,		30 brls.		41
E. London,	40	200 cks.		140

Sulphuric Acid—

Penang,	25 cs.		£19

Superphosphate—

Lyttelton,	30 t.		£85
Calicut,	10	3 c.	29
Dunedin,	50		150

Tartaric Acid—

Townsville Towers,	2 cs.		£13
B. Ayres,	5 cks.		175
Montreal,	6 brls.		75
Sydney,	1 t.		130

LIVERPOOL.

Week ending September 2nd.

Alum—

Havana,	7 t.	8 c.	3 q.	£20
Smyrna,	7	11		36
Montreal,	9	10		43
Sydney,	1			5
B. Ayres,	1			6
Venice,	1		2	5
Varna,	1	4	2	6
Bari,	1		3	5
Mogador,	2	2	3	10
Tetnan,	1	10		7
San Francisco,	14	17	1	67
Pernambuco,	2	1	2	15
Piræus,	2	1	2	9
Seville,	1	6		6
Valparaiso,	4	8	2	20

Ammonia—

Pt. Elizabeth,	2 cs.	£8

Ammonium Carbonate—

Montreal,		10 c.		£14
Danzig,	1 t.	2	1 q	31
Hamburg,	1		2	30
Marseilles,		4		7
Venice,		15		21
B. Ayres,		19	3	31

Ammonium Chloride—

Bombay,	4 t.	10 c.		£149
San Francisco,		9	2 q.	17
Pa.,	16			800
Bourgas,	1	1		34
Sofia,	1	3		38
Gijon,		19	3	38
Barcelona,	1			26
Lisbon,		15		30
Rotterdam,	1			21

Ammonium Sulphate—

Genoa,	25 t.			£210
La Pallice,	25			200
Rouen,	20			160
Palermo,	10	8 c.	3 q.	76
Valencia,	9	18	2	77
St. Nazaire,	9	18	3	79
Colombo,	4	5		39
Demerara,	21	5		172
Madeira,	1			8
Las Palmas,	55			447

Bleaching Powder—

Alexandria	3 cks.			
Ancona,	12			
B. Ayres,		20 brls	50 kgs.	
Genoa,	59			
Ghent,	71			
Havana,		40		
Leghorn,	16			
Lisbon,	20			
Montreal,	10			
Piræus,	5			
Rouen,	10			
San Sebastian,	59			
Venice,	3			
Boston,	730			
Baltimore,	187		60 bxs.	
New York,	143	45	50	
Oporto,	5			
Smyrna,		10		

Borax—

Halifax,		18 c.		£18
Montreal,	1 t.	12	3 q.	50
Sydney,	4			80
Syra,		4	3	4
Piræus,		6	1	6
Antwerp,	5	3		113
Rotterdam,	12	19	2	275

Calcium Chloride—

Iquique,	1 t.	9 c.	£25
Pernambuco,	4	4	37
Natal,	1	3	3

Carbolic Acid—

Antwerp,		6 c.		£18
Alexandria,	3 brls.			11
Odessa,		8	2 q.	9
Rotterdam,	11 t.	4		180
Barcelona,	1			61

Caustic Potash—

Wellington,		4 c.	£6
New York,	9 t.		226

Caustic Soda—

Alexandria,	39 dms.		
Ancona.	37		
Baltimore,	305		
Barcelona,	486		
Bilbao,	154		
Boston,	250		
B. Ayres,	70		
Callao,	20		
Danzig,	25		
Dunkirk,	15		
Fairwater,	41		
Fiume,	257		
Genoa,	51		
Hamburg,		4 bxs.	
Havana,		10	
Havre,	25		
Jaffa,	60		
La Guayra,	10		
Leghorn,	69		
Libau,	165		
Malaga,	70		
Malta,	22		
Montreal,	183		
Naples,	142		
New York,	1,110		
Pacasmayo,	60		
Para,	5		
Pernambuco,	25		
Philadelphia,	580		
Pt. Natal,		20	
Rosario,	40		
San Francisco,	375		
Santander,	40		
Savanilla,	50		
Singapore,	10		
Sydney,	70		
Valparaiso,	50		
Manila,	50		
M. Video,	141		
Acapulco,	50		
Antwerp,	33		
Bombay,	30		
Colon,	25		
Newcastle,	25		
N. Orleans,		10 cs.	
Rouen,	4		
San Sebastian,	60		
Seville,	825		

Chemicals *(otherwise undescribed)*

Montreal,	1 t.		£29
Oporto,		3 c.	5
Genoa,	1		30
Hamburg,		4	7
Calcutta,	10	13	35
Sydney,	114	4	185
Philadelphia,	13	12	448

China Clay—

Barcelona,	100 cks.		
Boston,	480	135 bgs.	
Rio de Janeiro,	86		
Bombay,	180		
Naples,	40		
Philadelphia,	200		

Chrome Alum—

Madras,	2 t.	4 c.	3 q	£228

Coal Products—

Alizarine

Lisbon,	3 cks.	

Pitch

Ibrail,	65 brls.	
Talcahuano,	150	

Tar

Accra,	10 bxs.	
Callao,	30 dms.	
Demerara,	20 brls.	
Galatz,	85	
Ibrail,	75	
La Rochelle,	802 t.	
Valparaiso,	50 hf.-brls.	

Tar Salts

Montreal,	2 cks.	

Cobalt Oxide—

Gijon,		1 c.	3 q.	£62

Copper Sulphate—

Konigsberg.	5 t.	19 c.	3 q.	£94
Danzig,	1	8	3	23
Piræus,		17	2	14
Catania,	14	16	1	236
Rouen,	5			78
Fiume,	5		3	78
Constantinople,	1			16
Galatz,	2	10		47
Taltal,	4	19		80
Paris,	59	2	3	1,049
Palermo,	2	18		45
Santander,	4	19		80
Odessa,	2		1	33

Copperas—

Madras,	2 t.	3 c.	1 q.	£5
San Francisco,	20			37
Pernambuco,	1	19	1	5

Disinfectants—

B. Ayres,	1 t.	3 c.	1 q.	£10

Dried Blood—

Rouen,	15 t.	3 c.	£1 21

Farina—

Maranham,	20 bgs.	

Gelatine—

Boston,	75 bxs.	

Guano—

Barcelona,	118 t.	1 c.	£1,152

Gypsum—

New York,	35 t.	19 c.	£115

Iron Acetate—

Pernambuco,	2 t.	3 c.	1 q.	£18

Iron Oxide—

Philadelphia,	16 t.	14 c.	£380
New York,	1	7	18

Lime—

Demerara,	99 t.	3 c.	£79
C. C. Castle,	3	12	7

Manure *(otherwise undescribed)—*

Demerara,	10 t.	1 c.	1 q.	£86

Muriatic Acid—

Pernambuco,	1 t.	2 c.	£13

Paint—

Acajutla,	2 cks.			
Bahia,	16 cs.	41 kgs.	1 brl.	
Beyrout.			55 dms.	
Cape Town,		40		
Colombo,			6	
Demerara,	4	457		
Genoa,	100 bgs.			
Gibraltar,	5	50		
Havana,	3		34	
Hong Kong,			272	
Lisbon,	2	6	34	brls.
Maceio,			6	
Manaos,	1 bx.		12	
Montreal	3		10	dms.
Talcahuano,	5			
Antwerp,		8		
Ambrizette,		29		
Axim,			20	
Barranquilla,		180		
Bilbao,			3	brls.
Boca,		10	10	
B. Ayres,	11		30	cs.

Gijon, 15 dms.
Gd. Bassam, 33
Havana, 20 cs.
Kotonou, 45
Malta, 80
Maranham, 3 10 brls.
M. Video, 13 cs.

Painters' Colours—
Alexandria, 7 bxs. 500 kgs. 18 dms.
Bathurst, 1 ck. 3
Bilbao. 22
New York, 17 27 366 brls. 24 pkgs.
Oporto, 1 cs.
Panama, 21 dms.
Pelotas, 20 40
Piræus, 1 tce.
Pt. Natal, 595 72 cs.
B. Ayres, 54 2 115 5 brls.
St. John's, N'fld., 410
Salonica, 2 brls.
San Juan, 2 20
Santiago de Cuba, 1
Shanghai, 40 dms
Singapore, 62
Valparaiso, 20 4 cs.
Bahia. 10 brls.
Coquimbo, 1 45
Dunedin, 10
E. London, 30
Hamburg, 100 bgs.
Kustendjie, 12 1 1 dm.
Lisbon, 16 2 cs.
Manila, 10 25 8
Marseilles, 30 pks.
Para, 20
Philadelphia, 42 250 bgs.
Pt. Elizabeth, 5 22
Rotterdam, 18 6 brls. 2 dms.
St. Johns, N'fld, 14 241 67 40 dms.
Seville, 9 bls.
Talcahuano, 35 19 cs.

Paraffin Wax—
Patras, 8 cs.
Para, 5 cks.

Phosphorus—
Shanghai, 4 t. 8 c. £1 020
Hiogo, 2 10 640

Potashes—
B. Ayres, 1 t. 2 c. £25

Potassium Bicarbonate—
Philadelphia, 1 t. 3 c. £29

Potassium Bichromate—
Copenhagen, 5 t. 7 c. £193
Pernambuco, 18 3 q. 32
Santos, 5 1 11
Piræus, 1 19 2 85
Pernambuco, 2 1 95

Potassium Carbonate—
New York, 9 t. 7 c. £167

Potassium Chlorate—
Hiogo, 22 t. 10 c. £860
Shanghai, 5 195
Porto Alegre, 2 74
Bari, 1 40
Venice, 10 20
Santos, 19 27
Sydney, 8 314
New York, 36 5 1,390
Rotterdam, 4 8
B. Ayres, 10 20

Potassium Prussiate—
Genoa, 4 t. 10 c. £792

Salt—
Accra, 12 t. 10 c.
Akassa, 509 12
Fiume, 403
Galveston, 150
Hamburg, 111
Lagos, 141
Lisbon, 2 cs.
Para, 381 5
Barbadoes, 75
Boston, 905 10
Rouen, 15
Delagoa Bay, 20
Dunedin, 50
Alexandria, 10
Anamaboe, 18 15
Antwerp, 130
Ambrizette, 8 17
Asinee, 12 10
Brisbane, 291 14
B. Ayres, 95 1
Calcutta, 7,471
Copenhagen, 1,580
Demerara, 89
Ghent, 190
Grand Lahore, 12 10
M. Video, 5 21
Muculla, 8 17
Newcastle, 100
New York, 150
Rangoon, 1,100
Rotterdam, 300
Saltpond, 24 7
Savannah, 609
Sydney, 9
Winnebah, 2 10

Salt Cake—
Gijon, 54 t 18 c. 2 q. £112
Lisbon, 30 46

Saltpetre—
Pernambuco, 5 t. 14 c. 1 q. £125
San Francisco, 3 10 77
Para, 1 10 3
B. Ayres, 2 46
Parnahyba, 4 5
Santos, 7 14 182
Tampico, 4 6 97
Maranham, 9 3 11

Sheep Dip—
Dunedin, 3 t. 2 c. 2 q. £75
B. Ayres. 20 430
Wellington, 6 1 182
Blenheim, N.Z., 1 16 3 44
Christchurch, N.Z., 18 t. 7 2 425
Wanganin, 1 t. 11 38
Nelson, 2 19 2 69
Timaru, 7 16 3 178
Gisborne, 5 9 126
Calcutta, 1 12 50

Soap—
Alexandria, 2 cs.
Algoa Bay, 510 bxs 10 6 bdls.
Axim, 210
Bathurst, 20
Bombay, 12 cks. 20
Capetown, 630
Colombo, 6
Demerara, 500
E. London, 303
Havre, 500
Kingston, 2
Kotonou, 20
Lisbon, 10
New York, 10 10 brls.
Penang, 300
Philadelphia, 4 cks.
Pt. Natal, 2,114
Quittah, 70
Rio de Janiero, 500
Rouen, 10
St. John's, Nfld., 280 22
Teneriffe, 498
Appam, 20
Assinee, 50
Barbadoes, 600
Brisbane, 550
Calcutta, 2
Cape Lahou, 10
Gibraltar, 207 50
Halifax, 3
Lagos, 160
La Guayra, 1
Lanzarote, 22
Las Palmas, 105
Malta, 80
Manaos, 150
Manila, 2
Melilla, 50
Montego Bay, 125
Piræus, 20
Pt. Elizabeth, 115
Rotte dam, 525
St. Thomas, 150
San Juan, 100
Shanghai, 601
Singapore, 128
Syra, 100
Tanga, 100
Tangiers, 15 5
Valparaiso, 123 17
Wellington, 50

Soda Ash—
Adelaide, 144 cks.
Baltimore, 20 886 bgs.
B. Ayres, 144 125 brls.
Copenhagen, 90
E. London, 40 kgs.
Galatz, 100
Genoa, 310
Gothenburg, 196
Hamburg, 50
Maranham, 30
Smyrna, 250
M. Video, 25
Naples, 5
N. Orleans, 23
N. York, 104 tcs 34 834
Para, 3
Philadelphia, 27 200 97 tcs
Rio de Janeiro, 80 100
Rotterdam 10 170 kgs. 50 bgs.
San Francisco, 256
Sydney 484 52
Yokohama, 200
Bombay, 16 60 brls.
Boston, 73 200
Calcutta, 50
Montreal, 14 670
Oporto, 4
Seville, 100

Soda Crystals—
Valparaiso, 100 brls.
B. Ayres, 100 kgs.
Capetown, 20
Talcahuano, 50
Halifax, 55
Kingston, 10 cks.
Montreal, 175
New York, 280
Quebec, 40
St. John's, Nfld., 10 44
San Francisco, 200
Tangiers, 10
Bombay, 250
Boston, 380 100
Lisbon, 10 cks.
Smyrna, 100

Sodium Bicarbonate—
Algoa Bay, 10 bgs.
Barbadoes, 100 kgs.
Barcelona, 75
Batoum, 60
Bordeaux, 10
B. Ayres, 30 cks.
Callao, 12 12 brls.
Capetown, 20
Copenhagen, 20
E. London, 62
Genoa, 75 4
Hamburg, 100 24
Havre, 70 2
Hiogo, 500
Libau, 85
Nantes, 32
Naples, 100
New York, 200
Odessa, 200
Paris, 80 8
Quebec, 126
Rouen, 40 4
St. John's, Nfld., 110
San Francisco, 100
Singapore, 5 12
Smyrna, 20
Sydney, 300 20
Vera Cruz, 60
Yokohama, 500
Ancona, 50 2
Bari, 38
Bombay, 125
Boston, 200
Calcutta, 250
Dunedin, 100
Ibrail, 20
Kobe, 100
Montreal, 605 30
Philadelphia, 4

Sodium Bichromate—
Pernambuco, 2 cks.

Sodium Carbonate—
Mollendo, 30 brls.

Sodium Chlorate—
St. Petersburg, 200 kgs.
Philadelphia, 100

Sodium Hyposulphite—
San Francisco, 100 kgs.
Tampico, 200
Calcutta, 45

Sodium Silicate—
Barcelona, 100 bgs.
Bilbao, 35 brls.
Boston, 30 cks.
Catania, 25
Leghorn, 30
Montreal, 50 dms.
N. Orleans, 64
Philadelphia, 11
Piræus, 10
Tampico, 4
Tunis, 10
Zante, 20

Sodium Sulphate—
Constantinople, 4 cks.

Sodium Sulphite—
Leghorn, 40 brls.

Starch—
Lisbon, 10 bgs.

Sulphur—
Pt. Natal, 1 t. 3 c. £25
E. London, 1 19 12
Boston, 200 8 652
Montreal, 115 4 416
Para, 1 6
Demerara, 7 8 40
Pernambuco, 1 2 3 q. 7

Sulphuric Acid—
Pernambuco, 3 c.
Pelotas, 8

Superphosphate—
Stettin, 1,900 t. 24 c. £

Tartaric Acid—
Havana, 5 c.

Varnish—
B. Ayres, 7 cs.
Demerara, 5 dms.
Havana. 1

Zinc Chloride—
Bombay, 2 t. 4 c. 3 q.

MANCHESTER

Week ending September 2nd.

Alum—
Alexandretta, 30 brls.
Tripoli, 4 cks.

Ammonium Carbonate—
Rotterdam, 5 pkgs.
Antwerp, 3 cks. 32 kgs.

Ammonium Chloride—
Alexandria, 20 brls.

Aniline Colours—
Rotterdam, 1 brl. 1 ck. 4 cs. 3 kgs.

Aniline Oil—
Rotterdam, 1 tin

Benzol—
Rotterdam, 10 dms.

Bleaching Powder—
Tunis, 5 brls.

Carbolic Acid—
Rotterdam, 35 cks.
Treport, 4 163 brls.

Caustic Soda—
Alexandria, 15 dms.
Tunis, 1

Chemicals (*otherwise undescribed*)
Alexandria, 20 cks.
Tunis, 3

Copper Sulphate—
Genoa, 70 cks.

Copperas—
Tripoli, 25 brls.
Bagdad, 60

Cream of Tartar—
Hamburg, 8 cks.

Dyestuffs (*otherwise undescribed*)
Rouen, 4 cks.

Linseed Oil—
Alexandria, 5 brls.
Beyrout, 8
Jaffa, 2
Tunis, 10

Magnesia—
Tunis, 6 tcs.

Magnesium Sulphate—
Alexandria, 2 cs.
Tunis, 1 ck.

Paint—
Beyrout, 22 dms.
Jaffa, 2 brls.
Manaos, 40

Painters' Colours—
Gibraltar, 40 kgs.
Mersyne, 7 pks.

Paraffin Wax—
St. Petersburg, 10 cs.

Potassium Prussiate—
Tunis, 1 kg.

Salt—
Rotterdam, 160 t.

Soap—
Mersyne, 1 brl.
Bagdad, 300 bxs.
Bombay, 18 cks.
Bussorah, 4 cs.

Soda Ash—
Beyrout, 50 brls.
Lattakia, 100 60 cks.
Tunis, 7 bgs.

Soda Crystals—
Tunis, 4 cks.

Sodium Bicarbonate—
Beyrout, 25 kgs.
Tripoli, 15
Tunis, 10
Trejort, 34

Tallow—
Rotterdam, 20 cks.

Tar Salts—
Hamburg, 40 cks.

Toluol—
Rotterdam, 10 dms.

Varnish—
Barcelona, 7 cks.

HULL.

ending August 29th.

2 cks.
120 bgs.

ium Sulphate—
g, 200 bgs.
185
rsburg, 236
173

ng Powder—
fors, 30 cks.
104

Soda—
26 dms.
12 cks.

ils *(otherwise undescribed)*
50 cks.

am,			20 pks.
	6	66 cs.	
	7		
			14
gen,		6	
nia,	4	25	40
	334 slbs.		
im,	355		
urg,		6	4
g,	9 cks.	5	8
fors,		2	
erg,	13		
rk,	10		
am,	9	50	
rsburg,		21	
	5		2
			9
	1		
	2		

eed Oil—
lam, 748 c.
808
200
nia, 52
66
urg, 100
g, 1,133
erg 17
am, 672

e—
fors, 10 brls.
rk, 250

ils *(otherwise undes.)*—
8 cks
10

4 cks.
rk, 77
76 t.

l Oil—
d, 14 c.
dam, 1,105
p, 423
37
nia, 627
nsand, 49
eim, 112
7
rg, 553
lam, 2
ger, 73
202

e—
agen, 37 t.

urg, 2 cks.

rs' Colours—
22 cks. 2 cs
dam, 18
p, 84 3 dms. 437 pkr.
3
nsund, 16
agen, 4 3
ania, 1 124
eim, 120
22
burg, 3 10
arg, 10
gen, 1
gfors, 10 7 cs. 2
a, 4
ork, 59 150 25
dam, 2 8 dms. 1
ger, 2
15
org, 10
110
rg, 150

rp, 149 t.
ansand, 6 cks

ne—
rdam, 12 cks.

Slag—
Abo, 98 t.
Uleaborg, 70
Wasa, 50

Tar—
Abo, 100 cks.
Amsterdam, 3
Antwerp, 31
Copenhagen, 10
Helsingfors, 150
Rotterdam, 1
Uleaborg, 10
Wasa, 60
Wyburg, 25

Treacle—
Bergen, 25 cks.
Wasa, 80

Turpentine—
Rotterdam, 1 dm.

Varnish—
Aalesund, 1 ck.
Antwerp, 2 1 cs. 3 dms.
Christiania, 3
Hamburg, 1
Rotterdam, 1
Stettin, 2
Wasa, 1

GLASGOW.

Week ending September 3rd.

Ammonium Sulphate—
Jersey, 147 t. 6¼ c.
Hamburg, 147
Bordeaux, 15 7¼
La Pallice, 253
Leghorn, 105 9½
Mauritius, 408 18¾
Nantes, 30 14¾
Barcelona, 76 3
Genoa, 50 17¼
Palermo, 20 12¾
Valencia, 260

Asbestos—
Yokohama, £290

Bleaching Powder—
Calcutta, 10 t. 5 c.

Caustic Soda—
Calcutta, 730 t.

Coal Products—
Creosote Oil
Christiania, £10
Hamburg, 56 t. 14 c.
Pitch
Calcutta, £27. 10s.
Rotterdam, 12 t.
Hamburg, 62
Canada, £71
U.S.A., 100
Montreal, 30
Tar
Calcutta, £50
Madras, 107
Colombo, 50
Hamburg, 781 brls.

Coal Products *(otherwise undes.)*—
Rotterdam, £284

Fustic Extract—
Genoa, £22. 12s.

Gelatine—
U.S.A., £263

Indigo Extract—
Montreal, £25. 18s.

Iodine—
Rotterdam, £200

Linseed Oil—
Krugersdorp, 1 t. 10 c.
Sydney, 8 10
Canada, 5 11
M. Video, 1 19¼

Logwood—
Montreal, £30
Canada, £37. 13s.
Toronto, £135

Magnesium Sulphate
Sydney, £23

Manure *(otherwise undescribed)*—
Demerara, 34 t. 8 c.

Paraffin Wax—
Venice, £28
Riga, 45
Rouen, 72
Barcelona, 185
Genoa, 74
Hiogo, 200
Penang 25

Paint—
Hong Kong, £55. 10s.
Hiogo, £30
Messina, 20
Yokohama, 60

Painters' Colours—
Cape Town, £28. 15s.
Krugersdorp, 29 13
Rio Grande do Sul, £81
St. John's, N'fd., 21
Sydney, 216
Bombay, 34
Calcutta, 111
Lucknow, 64
Mauritius, 118
Hong Kong, £328. 16s.
Milan, 74
Nagasaki, 34 15
N. Plymouth, 36 17
Penang, 44

Phosphoric Acid—
Mauritius, £30

Potash Salts—
Madras, £381

Potassium Bichromate—
Amsterdam, £198
Rotterdam, 198
Antwerp, 115
Calcutta, 1 t. 4¾ c.
Rouen, 196
Canada, 162
Genoa, 542
Hiogo, 210
Leghorn, 48

Rosin—
Calcutta, £90

Soap—
Antigua, 6 t.
Canada, 1 3 c.
Barcelona, 1 16
Penang, 2 10

Soda Crystals—
Mauritius, 26 t. 10 c.

Sodium Bichromate—
Antwerp, 2 t. 2¾ c.
Nantes, 5 10½
Rouen, 10 2¾
Canada, 1 18
Genoa, 20 11

Shumac—
Bombay, £48

Superphosphate—
Genoa, 19 t. 14 c.
Jersey, 120 10¼

Varnish—
Krugersdorp, £86
Mauritius, £24. 15s.

White Lead—
Calcutta, £50

Zinc Ashes—
Rotterdam, 37 t. 10 c.

TYNE.

Week ending August 29th.

Alkali—
Reval, 58 t. 6 c.
Riga, 60 10
Christiania, 5 17
Gothenburg, 3 1

Alumina Sulphate—
Konigsberg, 5 t. 10 c.

Ammonium Carbonate—
Barcelona, 6 c.

Antimony—
Barcelona, 12 c.

Asbestos—
Christiania, 14 lbs.

Barium Binoxide—
Venice, 2 t.

Barium Carbonate—
Antwerp, 20 t. 7 c.

Bleaching Powder—
Rotterdam, 21 t. 6 c.
Venice, 4 9
Genoa, 5 14
Antwerp, 4 10
Hamburg, 1 18
Barcelona, 10
Christiania, 17 15
Gothenburg, 50 14

Caustic Soda—
Genoa, 14 t. 10 c.
Venice, 55 8
Antwerp, 37 14
Hamburg, 80 2
Barcelona, 43 16
Copenhagen, 2
Konigsberg, 48 16
Rouen, 4 18
Christiania, 3
Gothenburg, 4 18

Litharge—
Riga, 5 c.
Copenhagen, 11
Rouen, 3 t. 14

Magnesia—
Venice, 4 c.
Antwerp, 1
Hamburg, 3
Barcelona, 14 t. 3

Manure—
Valencia, 165 t.

Paint—
Bergen, 7 c.
Hamburg, 15

Phosphorus—
Barcelona, 1 t. 17 c.

Soda—
Rotterdam, 16 t. 9 c.
Venice, 6 9
Bergen, 1 4
Constantinople, 26 6
Christiania, 10
Gothenburg, 14 15

Soda Ash—
Venice, 41 t. 1 c.
Konigsberg 172 9
Christiania, 5 11
Laurvig, 10

Sodium Hyposulphite—
Antwerp, 6 t. 7 c.

Sodium Silicate—
Gothenburg, 2 t. 7 c.

Sodium Sulphate—
Antwerp, 50 t. 2 c.
Hemosand, 240

Sulphur—
Riga, 125 t.
Gothenburg, 25

Superphosphates—
Helsingborg, 1,005 t. 8 c
Riga, 191 19

Tallow—
Leghorn, 6 t.

Tar—
Reval, 3 t. 4 c.

White Lead—
Riga, 4 t.

GOOLE.

Week ending August 26th

Benzol—
Rotterdam, 72 cks.

Chemicals *(otherwise undescribed)*
Amsterdam, 10 cks.
Boulogne, 5
Harlingen, 30
Rotterdam, 140 bgs.

Coal Products *(otherwise undes.)*—
Antwerp, 56 cks. 7 dms
Boulogne, 233 2 cs. 3
Rotterdam, 275 6

Colours—
Amsterdam, 1 ck.
Antwerp, 2
Boulogne, 1 cs.
Ghent, 3 1
Hamburg, 1

Dyestuffs *(otherwise unde rib a*
Hamburg, 40 cks.

Manure—
Boulogne, 46 bgs.
Dunkirk, 200

Pitch—
Antwerp, 220 t.

GRIMSBY.

Week ending August 29th.

Alkali—
Hamburg, 16 cs.

Chemicals *(otherwise undescribed)*
Hamburg, 26 dms. 1 cs.
Rotterdam, 30

Coal Products *(otherwise undes.)*—
Dieppe, 116 cks.
Hamburg, 3

Colours—
Antwerp, 1 cs.
Dieppe, 14 cks. 2
Hamburg, 4
Rotterdam, 10

Glue—
Gothenburg, 10 bgs.

Phosphate—
Esbjerg, 1,530 bgs.

Soap—
Dieppe, 1 cs.

Tallow—
Gefle, 10 cks.

PRICES CURRENT. WEDNESDAY, SEPTEMBER 9TH,

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % .. ..per cwt.	5/6 & 8/6		
,, Glacial.. .. .. ,,	40/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	5	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B.. .. .. per lb.	0	0	2¾
,, =24° B.. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate.. .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate.. .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	12	6
,, ,, (grey) Hull .. .. ,,	7	12	6
Aniline Oil (pure) .. .. per lb.	0	0	10¼
Aniline Salt ,, ... ,,	0	0	9¾
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide).. .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	12	0	0
Chromium Acetate (crystal).. .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	4	6
,, 50/90 ,, ... ,,	0	3	1
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	6¾
,, (crude 60°) .. .. per gallon	0	2	0
Creosote (ordinary).. .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston.. .. .. ,,	1	11	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	48	5	0
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°).. .. .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	5	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	22	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	7		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magnesia .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. .. per ton	2		
Manganese, Sulphate .. .. ,,	16		
Borate .. .. per cwt.	2		
,, Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils:—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	18		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	20		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. ..nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	20		
,, ,, (Caustic Potash) 70/75 % .. ,,	19		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4		
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3		
,, ,, (Soda Crystals) .. .. .. ,, ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax).. .. .. net, per ton	18		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw) .. ,, ,,	4		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	6		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25%.. .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	8		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	6	5	0
,, (Roll Brimstone) .. .. ,,	6	5	0
,, Brimstone: Best Quality .. .. ,,	4	15	0
Superphosphate of Lime (26% .. .. ,,	2	17	6
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	63	0	0
Zinc (Spelter) .. .. ,,	16	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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CURRENT TOPICS.

THE PROSPECTS OF PEACE IN THE COAL TRADE.

As we are now approaching within measurable distance of winter, and the Board of Trade returns for the last two months have been scarcely as favourable as they were in the opening months of the year, it is only natural that all who take an active part in the industries of this country (and particularly the chemical trades) should evince a certain amount of anxiety as to the prospective state of the coal trade.

At present there is a lull in the turmoil that attended the dissolution of the Conciliation Board, but the point on which enlightenment is sought by one and all is whether the passivity of the moment is to be interpreted as indicative of peace or preparation.

We are disposed to think that the present position indicates neither the one nor the other, but that matters are in a state of transition. On the one hand, there are many pits being closed and men are being thrown out of work. But there are new pits opening up, and old ones being re-opened. While these changes for the one part tend to create dissatisfaction, on the other they will give those who have been thrown out, an opportunity to seek for fresh employment. They therefore virtually neutralize each other.

Concurrently there is the unsettled state of the Scotch trade to be taken into consideration. The discontent in the North is widespread, and the fever of discontent is very catching.

Over and above all this, there are several projects in the air concerning which it is impossible to do more than conjecture. After many false alarms it is now definitely established that a combination of the leading firms in the London coal trade has been concluded. Then the borings in the Kent fields are progressing steadily, and without a hitch; and although (assuming the present rate of progress to be maintained throughout the winter) it will be May, 1897, before coal is reached, it is nevertheless necessary to face the fact that when the output of coal is commenced, it is highly probable that there will be a diminution in the quantity of coal drawn from the Midland and Northern counties for the Southern consumptive and export trade. Along with this it must be borne in mind that ere long developments in certain Yorkshire collieries will have been accomplished which will greatly increase their powers of production, if not make them the largest colliery undertaking in that county.

As far as can be seen, therefore, it would appear that things will go on much as they are until the influence of some of these new departures makes itself felt. Some of them tend towards the provocation of a strike, while others act as a corrective. It remains to be seen how the pinch of winter will affect the trend of affairs.

Whatever the upshot may be, we sincerely hope that before war between the masters and the men is again declared, a more careful study will be made of the working of the sliding scale in South Wales. We are not alone in our opinion in regard to this point, as may be seen by the following expression of opinion which we feel justified in citing in this connection :—

"The twenty-fifth anniversary of the South Wales sliding scale seems to mark a record, and to point a moral. It is worth deliberating over by the coalowners and colliers. Of course, there is a difference in the conditions which govern a coal trade that is seaborne outwardly and a coal trade that has been created, and thrives chiefly on home consumption. The South Wales steam coal trade engendered itself ; but, beyond the forethought of its ostensible progenitors, it has become an important factor in our foreign commerce with all the sea-faring nations of the world. It is doubtful, after all, whether it gains so much advantage, as an oversea trade, as it might gain by procuring something more like a competitive market in places nearer its home. But, however the coal is raised, wherever it is shipped, wheresoever it may be consigned, there must always remain two tangible facts to be handled by those who discuss the prices of the product. These facts—these tangible facts—we venture to say, are better understood among the rough and unlettered colliers of the South Wales valleys than they are in the richer districts of the North, where conciliation boards and sliding scales have been tried and tried over again, and, unfortunately, as the last issue would seem to show, tried at last in vain."

Lastly, we would commend to the notice of all those who thirst for strife and strikes, that we are as yet barely rid of the far-reaching after effects of the last strike, as was shown quite recently by the painfully pitiful proceedings in the Rotherham County Court, and emphasised by the remarks of his Honour, Judge Waddy, concerning the same.

THE BITER BIT.

When referring in our last issue but one, to the anomalous action of the Glassworkers' Union in compelling the men at the works of Messrs. Steven and Williams to come out on strike, we expressed the opinion that the leaders in some Trade Unions do not act, or else do not know how to act, for the benefit of those they profess to guide and protect with such brotherly solicitude.

In a measure this opinion was strengthened at the time by the fact that the firm in question had taken the bull by the horns and inserted advertisements in various papers inviting glassworkers to engage with them at satisfactory wages for a term of years, to fill the places that the Union were compelling their men to vacate.

It only shows how great is the desire in some quarters for permanency of employment, when it turns out that all the places have been filled, and, contrary to the expectations of the Union officials, the works have been carried on as usual. The officials were taking alarm recently at the amount of out-of-work pay the Society had to disburse, and were lamenting and deploring the fact that so many men, barely passed their prime, should be "done" as glassmakers. In the light of this latest exhibition of Trade Union tactics we are perhaps enabled to see how it is some of them are "done."

It is very evident that in this case the men were far more capable judges than their leaders, since individually they were loth to strike, and despite the hardship that has thus been forced upon them, it has been publicly declared on their behalf, that they have no intention of seeking to molest those who have supplanted them. We have faith in the honesty of their intentions. If the police protection which has been provided proves to have been a necessary precaution, we feel sure any intimidation will be traceable to the evil counsel their self-seeking, addle-pated leaders.

Even the highest of the high in Trade Union circles seem to losing all their gumption. While all the success of the futu depends on enlisting public sympathy, and they seek condone much of their obvious clap-trap on the ground th it is only indulged in to draw the attention of the public, th deliberately stultify the effect of their Annual Congress expelling the reporters of certain non-union papers from th meetings.

They preach liberty, equality and brotherly co-operati but instil their doctrine through the instrumentality undiluted despotism.

THE TRADE OF GREAT BRITAIN WITH NE SOUTH WALES.

DESPITE the competition of Germany, France, and other countr Great Britain retains its hold on the Australian market, a with the increasing trade in Australian produce, is likely to continu doing. Much of this is largely due to British manufacturers more clo studying colonial requirements ; also to the cheapened and more ra means of communication between British and Australian ports. T there should be some increase of trade between Australia and o countries was to be expected in view of the establishment of reg steam communication between France, Germany, and other count and Australia, but this increase has been comparatively slight, a decrease of British trade with the colonies during the last few ye being clearly traceable to the results of industrial depression rat than of foreign competition. The Statistical Register of New So Wales shows that the British imports into that colony during 1895 w of the estimated value of £6,420,107, to which should added a considerable percentage of the imports from the ot colonies, including New Zealand, valued at £7 321,668., representing imports from the United Kingdom re-shipped New South Wales. Against the British imports valued several millions sterling, the imports from Germany were of estimated value of £425,697. ; France, £76,663. ; Belgium, £150,28 and the United States, £624,288 The figures in 1891 we Germany, £773,016. ; France, £120,321 ; Belgium, £188,27 United States, £1,277,032. ; so that if there has been a decrease the Australian import trade during the last few years it has been less by Great Britain than by her commercial and industrial riva At one time German glassware and chinaware were more larg imported than at present, their place now being taken chiefly British goods. The supply of window and plate glass is obtain principally from Belgium, that from the United Kingdom consist largely of the higher-priced qualities. In paper, stationery, pho graphic materials, brassware, tinware, hardware, hollow-ware, iron a steel goods, cutlery, arms and ammunition, machinery, lamp-ware, a innumerable other commodities, British manufacturers are largely ab of their Continental and American rivals, the exceptions being co paratively few, such as chemical products and wooden matches fr Germany, and reapers, binders, furniture, clocks, watches, and th from the United States, the value of the whole being limited in co parison with that of the British imports.

WHERE WAS THE EDITOR?—It is often said that what Lancash thinks to day London says to-morrow, and though members of t metropolitan populace are prone to smile sardonically when told they must have a care lest their laughing dismissal of the idea be turn to lamentation. It is almost incredible that any leading London da or evening paper could display such a hopeless incapacity to grasp ev the rudiments of a public scheme, as has been revealed by t paragraphs and articles in which several of the London papers refer the scheme for taking the Manchester sewage *effluent* out into the tid waters of the Mersey. Most of them speak as if the raw sewage was be so disposed of. The *Evening Standard* compares the propos tunnel to the Mersey with the great Cloaca of imperial Rome, a thinks London would be glad if it could solve the sewage problem the same way for ten times the estimate for the Manchester work The *Standard* concludes :—"With her water brought from Lo Katrine (*sic*), her sewage carried straight down to the sea, and a can by which ships can carry her produce to all parts of the world, Man chester can claim that she sets an example to all British towns, Lond not excluded." It is very evident that some of those who follow th high calling of journalism would do well to learn a thing or two fro their much despised brethren who are only "technical journalists."

The Patent List.

s list is compiled from Official sources in the Manchester ical Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

PPLICATIONS FOR ENGLISH LETTERS PATENT.

vements in Colouring Matters. W. S. Simpson and Brooke, Simpson Spiller, Ltd. 19,174. August 31.

ved Apparatus for the Mechanical Treatment of Sewage. E. Green. 89. August 31.

facture of Chemical Products by Electrolysis. E. J. Constam and von Hansen. 19,218. August 31.

ng Bleaching Powder to Prevent it Losing Active Chlorine. Y. Johnson. 19,222. August 31.

F. M. Sanders and the Digby Patents Co. 19,257. September 1.

ical Furnaces. A. J. Boult. 19,290. September 1.

vements in Carboys and Demi-johns. W. A. Lake. 19,297. ptember 1.

Residual Products from Voltaic Batteries. W. Walker, junr., R. Wilkins, Jabez and Joseph Lones. 19,308. September 1

fying Bone Black, etc. J. Wetter. 19,310. September 1.

amel. Paint. G. W. N. Hamilton. 19,312. September 1.

ng Brine. W. Cooper. 19,346. September 2.

ial Stone. A. McLean. 19,419. September 2.

atus for Drying Dyeing-extracts. S. Smithson. 19,591. September 4.

STRACTS OF LATEST COMPLETE SPECIFICATIONS.

se abstracts are specially prepared for the Chemical Trade Journal, LL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the*

vements in or Relating to the Production of Ammonia from aste Nitrogenous Lyes or Gases. H. H. Lake, 45, Southampton ildings (communicated by L. Steanberg, of Jersey, New Jersey, U.S.A.). g. Pat., 7,002 March 31, 1896.

products of the dry distillation of nitrogenous organic substances s hair, wool, skin and hides, blood, &c., and particularly the om sugar extraction, are converted into ammonia by the aid of an e aluminate which acts both as a carrier of the lye and as a t. In preparing the carrier, bauxite is used, excess of silica neutralised by the addition of lime, so as to facilitate the formation minate of potash, this being the alkaline aluminate to which ence is given. The bauxite is ground and mixed with black ash de potash, sufficient water being added to form a paste, which is quently dried at 212° F. The mass is then ground to a powder. process the waste sugar lyes, or refuse from the manufacture of l from molasses, are mixed in equal proportions with this powder % of bauxite also added, the lyes having previously been concen- to 40° B. The mixture is stirred until it becomes stiff, and pressed into blocks. These are broken into convenient sized , and heated to redness in a retort, which preferably is of similar uction to those used for revivifying bone black. The gases given conducted downward through the glowing mass. A continuous of similarly prepared crushed bricks cotaining waste lye is fed the top of the retort, the gases being converted into ammonia. e process progresses the incandescent mass can be gradually with- from the retort at the bottom quite free from organic matters It is in a fit condition to perform the part played by the previously bed powder used for mixing with the lyes. It can, therefore, be d and used again with the addition of another 30% of bauxite. excess can be rendered marketable by leaching with water saturating the solution with carbon dioxide. Carbonate otash remains in solution, and hydrate of alumina precipi- out, both of which can be concentrated and dried to form antable articles. The mechanical advantages of an alumi- as a carrier are that the bricks as formed do not swell; they t crumble and so clog the passages for the travel of the gases; and do not flux or melt. The chemical advantages result from the nce of aluminate of potash which acts on the nitrogenous r in the same way as the hydrates of potash, soda, or lime, while it ssible to "glow" at a sufficiently low temperature to avoid k of dissociating the ammonia.

ovements in or Appertaining to Separating Oil from its Volatile olvent. G C. Dymond, of the firm of W. P. Thompson and Co., 6, Lord- reet, Liverpool (communicated by G. F. Metzer, 61, McLean-street, Cleveland, hio, U.S.A.). Eng. Pat., 15,050. July 7, 1896.

the so-called naphtha process of extracting linseed oil from the , the injection of live steam to vapourise the solvent, though prac- y successful, has serious drawbacks, the chief two of which are, the sive formation of "foots," and the peculiarly rank taste and smell h is imparted to the oil. In this invention, the mixture of linseed oil and naphtha is heated, and hot water injected instead of steam. The process is conducted in a suitable rectangular tank the top of which is arched, there being five drawings illustrative of the tank and its fittings. The mixture is first heated by a steam coil situate on the bottom of the tank, and agitated by a series of fanner-blades carried on a pair of parallel shafts. When heated to a temperature sufficiently high to vapourise the naphtha, hot water is sprayed in through perforated pipes, the vapour being exhausted through an exit pipe as fast as it is liberated. The water injected is heated by the waste steam from the coil. When the volatilization of the naphtha is completed, the steam and water are cut off and the agitators stopped. The resulting product virtually consists of 90% oil and 10% water, and is drawn off for final treatment. The principal advantages claimed are, entire freedom from smell, the oil being comparable with that obtained by expression, and the avoidance of the formation of "foots." Furthermore, by the action of the water, the oil is washed and is lighter in colour than the product from the old live-steam treatment.

New and Improved Process of, and Apparatus for, Separating Naphtha or other Volatile Solvent from Oil. G. C. Dymond, 6, Lord-street, Liverpool (communicated by G. F. Metzer, 61, McLean-street, Cleveland, Ohio, U.S.A.). Eng. Pat., 15,597. July 14, 1896.

This patent has reference to a number of detailed improvements in the apparatus used for achieving the ends set forth in Specification 15,050, 1896. The apparatus is rendered more self-contained by the introduction of exhausting fans into the naphtha-vapour exit pipes. The agitation of the contents is also effected by hot air instead of revolving fanner-blades. The benefit gained by this substitution is that the oil is bleached as well as agitated, and a smaller percentage of water is left in the de-naphtharised oil; only sufficient being left to ensure the safety of the process. By means of an internal arrangement of trays, a large surface of the mixture of oil and naphtha is exposed to the heat, thereby accelerating the volatilisation of the naphtha. The process as modified, is applicable to animal as well as seed oils. There are no less than seventeen claims in the specification, which are supplemented by seven drawings, indicating principally the construction of the internal trays, and the disposition of the hot air pipes and exhausting fans.

Improvements in the Electrolytical Manufacture of Bleaching Liquid. C. Kellner, 29, Wasagasse, Vienna IX., Austria. Eng. Pat., 17,525. Sept. 19, 1895.

An 8 to 10% solution of salt is run continuously through an electrolysing cell, being passed into a cooler as it leaves the cell, and then returned to the latter. The decomposition is very slight, generating only about 0·05% of chlorine during each passage, the heat produced by the work of the current being constantly removed by passing through the cooler. This method is pursued until the desired degree of concentration, say 1·5% of chlorine, has been reached. In this way it is claimed that the work done by the current does not fall appreciably below the theoretical figure determined by calculation. There is one drawing.

Improvements in the Manufacture of Porous, Hard, and Acid-Resisting Plates, Bricks, and Pipes for Filtering and Like Purposes. W. Schuler, Isny, Wurtemburg, Germany. Eng. Pat., 18,573. Oct 4, 1895.

Equal parts by volume of calcined Kieselguhr, washed powdered quartz, and silicate of soda, are mixed in as dry a state as possible and well pressed in moulds. The moulded bricks harden in the air in a few hours, and are then gently burnt up to a clear red heat. After allowing to cool slowly, a brick of low specific gravity is obtained, possessing the properties set forth in the title. The technical advantages are, the hardness, uniform porosity, and the exceptional smoothness of the exterior surface of the brick. The mixture does not shrink in burning. Pipes made in this way are specially suitable for filtering purposes on a small scale.

NEW WATERWORKS FOR LEICESTER.—Last week new waterworks for Leicester, constructed on the Charnwood Forest at the cost of £350,000., were opened by the Mayoress (Mrs. Wood), in the presence of a large company. The borough now possesses three reservoirs, capable of supplying a population of 300,000 persons at the rate of 20 gallons per head per day. The total capital sunk in this department of the municipality is over £800,000.

INTOXICATING "HERB" BEER.—At Lancaster, on Thursday last week, Richard and Nancy Howson, refreshment-house keepers, were fined 5s for selling herb beer containing 2·7 per cent excess of alcohol, making it almost equivalent to common beer. The bench declined to allow costs to the prosecution, stating that they were not in favour of carrying out the law so exactingly. The defendants were innocent of any intention to defraud, fermentation having taken place, which was beyond their control.

THE CHEMICAL INDUSTRY OF BERLIN.

THE following is a special abstract of the report on the German chemical trade during 1895, which is prepared, and has recently been issued, by the Berlin Chamber of Commerce. The report for the previous year will be found in the *Journal*, No. 433, p. 148. The development of the Berlin chemical industry during 1895 may be characterised as very favourable so far as the volume of business is concerned. In the majority of the products a brisk trade was done during the whole of the year, but unfortunately at unsatisfactory prices. From the commercial treaties concluded with foreign countries, substantial advantages have resulted in the case of individual articles only, though for the general bulk of the trade the stability of the duty question has been advantageous, while export business has been aided by the steadiness of exchange and of the price of silver. Unfortunately, the tariff war with Spain has almost killed business so far as that country is concerned. There is still a repetition of the old complaints of excessive railway freights, which frequently have the effect of throwing the Berlin district out of the running in the case of foreign trade.

In contra-distinction to the firm prices maintained by most raw materials, nitrogenous articles (nitrate of soda, ammonia water, etc.) sank in value continuously throughout the year. *Nitric acid* maintained its position practically independently of the price of nitrate of soda, the 36% pure article being quoted on an average at 23 marks per 100 kilos, including packages. On the other hand, *sulphate of ammonia* fell continuously month by month.

The sales of *carbonate of ammonia* were satisfactory, prices ruling between 69 and 70 marks per 100 kilos at makers' works. White crystallised *ammonium chloride*, which is continually finding a more extended application for battery purposes, realised on the average 59 marks per 100 kilos, though even in this article the backward tendency of ammonia values made itself felt. The same remark applies to *liquor ammonia*; the most general strength, 0·910 specific gravity, of which at the beginning of the year 100 kilos were value for 36 marks including package, sank in price till only 30 marks were obtainable. *96 to 98% Potash* maintained itself at 36 marks per 100 kilos, though sales were considerably diminished by the influence of substitutes now ruling the market. In the last months of the year stocks were even scarce, and a hardening of price thus rendered possible to the extent of 2 marks per 100 kilos.

The international association which had for one of its primary objects the limitation of the production of *oxalic acid* and *oxalates* has been successful in its operations during the year, and maintained the price of the former at 70 marks per 100 kilos.

Boric acid and *borax* have been briskly sought after during the year, and prices have averaged about 40 marks for borax and 60 marks for boric acid.

Business in *chlorate of potash* has continued unsatisfactory. Prices have fallen still farther in the course of the year, and the technically pure article only realises the disproportionate figure of about 80 marks per 100 kilos.

An attempt was made by the North and Mid-German manufacturers to raise the price obtainable for *salt-cake*, but in spite of fairly brisk business the results have afforded little satisfaction.

The sales of *soda crystals* showed increasing quantity, but very little pecuniary return. Although the price of soda-ash showed no weakening, no improvement could be realised, as the competition of a new factory has been added to that already existing.

Business in *water-glass* has been about the same both in quantity and price as during the preceding year. For export prices have perhaps somewhat fallen but the quantity remains the same.

Sales of concentrated *sulphuric acid* were exceedingly brisk throughout the whole year, though it was difficult to realise even the depressed prices of the year before. The low grade acids which find their way to the manure maker were very difficult to dispose of even at ridiculous prices. In *hydrochloric acid* too an excessive production was indicated, and prices fell from 6 marks to about 5½ marks per 100 kilos, including packages.

The very low prices ruling at the end of 1894 for *wood spirit* experienced a still further depression during the year under review, and by the middle of 1895 had reached the lowest point hitherto touched. Since then a gradual improvement has been noticeable. The same remarks apply to *methyl alcohol* and other dematuring agents.

Acetic acid has also receded in consequence of the low price of *acetate of lime*, but here there is some prospect of improvement based on better reports from America.

The consumption of *liquid carbonic acid* for use in breweries and the manufacture of aerated waters, has continued to increase. The difference between the cost of production and the selling price has, however, immediately stimulated production, so that even during the summer months prices have steadily receded, and an increase of business of about 40% has been accompanied by a fall in values of between 15 and 25%. The price of the liquid acid in buyer's packages was at the end of 1895 42½ to 40 pfennige retail, and about 32½ to 30 pf. wholesale per k Berlin exports in this article to the Northern countries have suffe severely from competition. The Austrian trade has been handicapp by tariff arrangements, and practically nothing has been sent to Ru on account of high tariffs and cost of transport. For the trade Belgium, France, and countries over sea Berlin is practically out of market, as the West German works can produce more cheaply fr the natural product, and are better situated as regards means transport.

The market for *coal tar products* has slowly but surely impro throughout the year, and financial results have been correspondin better. Brisk business has been done in *pitch* and *roofing felt*; for first-named particularly, higher prices have been realised with favourable effect upon the crude tar. A very satisfactory business been done too in *creosote* preparations, though at low prices.

Of the finer *coal tar products*, *benzol* and *naphthaline* have bee particularly good demand; *anthracene* has only maintained last ye position. Benzol has been employed largely in the gas works enriching purposes, and in addition to this the aniline requisem were considerably increased. This led to a great scarcity of the arti and its price at the close of the year was double that at the beginn This position is hardly likely to be maintained, as the coke ovens probably be stimulated to increase their production. The improvem in *naphthaline*, however, rests upon a safer basis. This material now such an extended application that the output is easily absor and it is no longer, as formerly, a drug on the market.

Equally favourable has been the position of *pyridin*. The pric this article has gone up about 30%, being largely maintained by English syndicate of tar distillers. The same agency accounts for stability of *anthracene* prices. This for a long time seemed likel break down on account of the largeness of stocks, but the situation been gradually changed by a much increased demand.

The consumption of intermediate products for the coal tar col industry seems to have increased largely during 1895. The ho however, that were built upon commercial treaties do not appea have been realised, as the growth of the industry has not been confi to Germany, and competition has made itself severely felt. It is s gested that the situation might be relieved by special tariffs for th articles.

The *coal tar colour* industry itself has been brisk throughout the y Prices remained fairly constant in the three first quarters, but rapid rise in benzole produced a corresponding result in the finis articles. From the same cause *aniline salt* and *aniline oil* advan even more rapidly, and the latter became exceedingly scarce chiefly account of American consumption.

In spite of the fact that the general business prosperity of the coun has been beneficial in *mineral colours* and in *wood* and *aniline varn colours*, complaints have been rife on account of the low prices realis Of the foreign markets English and American have been the b Business with Russia and Austria would have been facilitated if t class of goods had received more attention at the hands of the fram of the tariff laws.

In the department of the cheap non-poisonous chemical pigme exports to America show an increase as compared with the previ year, but the home trade and that with the treaty countries show advance. In fact, as regards the latter, no increase of business possible under present conditions, for reasons indicated in last ye report. Exports to Belgium were in 1895 somewhat greater tha 1894.

Lacquers and *Varnishes* show distinctly better returns than for previous year, and supply and demand were well balanced.

THE TINPLATE TRADE.—It is reported that in connection with Welsh tinplate trade 6,000 men (being two-thirds of the workers) h signed a document empowering the Executive Council of the Union bring about the enforcement of the 1874 wages list, by a gen stoppage on October 1st.

POISONED BY PYROGALLIC ACID.—At Nutley, Sussex, last we a Coroner's jury found that Mrs. Violet Browning, aged 24, wife Dr. Browning, met her death by misadventure. Deceased took bottle from a sideboard whilst it was dark, and drank some of contents, believing it to be medicine, whereas the bottle contain pyrogallic acid used for photographical purposes.

WANT BETTER OIL MILLS.—The mills where olive-oil is made the Alpes Maritimes, are, according to British Acting-Consul Jer (Nice), so far as machinery goes of a very primitive character, gener driven by water wheels; these are defective in construction, and the of the water badly arranged. The machinery inside the mills is m up of clumsy wooden cogs and contrivances. The Consul is sure improved machinery for making olive-oil would find a ready sale in South of France and Italy, providing that it was not of too complica or expensive a character.

Reports of Companies.

THE CAPE ASBESTOS CO., LD.

hird ordinary general meeting of the shareholders of this was held last week at Winchester House, E.C., Mr. L. er, the chairman of the company, presiding.

cretary, Mr. Edward J. Sargeant, having read the notice con- he meeting,

hairman, in moving the adoption of the report and accounts, were most exhaustive and gave full information of the opera- he company during the past year. He was sorry to say that profit had been swallowed up by administrative and other ex- England and South Africa, and the result was, the loss of oo. He regretted this still more because at the meeting last eld out hopes which had not been realised; but he might a matter of satisfaction, that their asbestos was getting more The consumption was every day becoming larger, and their which did not look brilliant, was, all the same, hopeful, and l that when he next came to address the shareholders at the neeting he would be able to place a more satisfactory state- ore them.

Oats, a director, seconded the motion, and said he had been y his colleagues to elaborate the statement which had before the shareholders in the report. He did not think en taken sufficiently into consideration that the article which any had started to manufacture and sell was absolutely new, however great its merits, these merits could not be known the lapse of a certain time in which to prove them, and until, mpany's part, they had spent sufficient money in advertising cies, so as to bring their article to the notice of users. He inced that it would then be used in large quantities. The oint with regard to it was that it was proved to be a mineral e lightest and strongest of any, and, with those points of e, they expected to have a great future before the company. re without competitors in their special line, and only required tion of the merits of the article, in which respect they were gressing, in order to be successful; but great prejudice always gainst the introduction of any new article, whatever its merits, ever highly it might have been appreciated by those who had times before. Of course, there was asbestos and asbestos. alities were very brittle, and were thus rendered entirely useless purposes; but they had a fibre which was extremely strong, way brittle, which could be spun into cords and ropes that l not unfavourably with ordinary rope both as regarded weight ngth. Confessedly, it was not quite so strong or light; as about two-thirds the strength of ordinary rope, and lf as strong as the best Russian Manila. The samples ed fibre and cords which were exhibited on the table ly of unique strength, and when it was remembered that those were made out of stone, and not from any vegetable product, be acknowledged that there was in an article of that kind some- it would hereafter become well known and highly appreciated. be asked upon what grounds it would be appreciated above fibre. One ground was that it never rotted or deteriorated of time. It was quite proof against any of the atmospheric s which in a season or two affected, for instance, the lanyard to a flagstaff. It would readily be seen how desirable it was ttached to windows cords or ropes which were unrottable. They it disinterested proofs that their fibre for engine packing was equal, if not superior, to any other, and, it being sold by hey could supply, because of its lightness, a greater number given the same price per kilo or pound, than were supplied s. Upon these grounds they could compete very successfully le rivals when once they had lived down the prejudice – and not r a disinterested prejudice—against blue asbestos. The as that their article was growing in consumption in the s indicated. But the most ready appreciation they nd for it was in its non-conducting properties. Share- would observe that it really was a fibre, and no ld ever take it to be a mineral product, but some vege- animal product. In point of lightness it had everything end it, and as a non-conductor he believed it to be superior to er yet used. It could be rendered comparatively cheap, in spite of its excellent properties, they had had to bring it ilar lines of price with other products used for covering tors, boilers, &c. They were obtaining orders for its use for poses, almost unsolicited, from persons who had no interest to heir recognising the article as unique and particularly suitable onducting purposes. Their manager, Mr. Smith, had taken a terest in introducing it for upholstering work—bedding, and f that kind—and no doubt it possessed many qualities which particularly to be recommended on sanitary grounds, while its non-conducting properties also came into play in that respect, because it was known that for bedding uses the article which was the best non-conductor was really the warmest. He was glad to let the shareholders know that, so far as his information went, their article was becoming appreciated very rapidly, and their sales for what had gone of the present year, speaking of the manufactured article, had already exceeded those of last year. During last year they sent a large quantity of crude asbestos to the French company, and, of course, made their profit on it; but, so far as their manufactured goods were concerned, they were increasing the volume of their business, and the directors hoped, as time went on and their agencies were extended, and people knew the value of the article, they would be able to go on increasing almost without limit, because, granting that it was superior to any other for the purpose, the field into which it could go for use was so great that, however large their stocks of crude might be, they might look forward with certainty to the time when they would all be required. At the Cape the work at the mines had been prosecuted throughout the year; but production had now been stopped, because their mines were so inexhaustible that they could produce the crude material at a much greater rate than they could manufacture or sell the finished article. Therefore, it was not proposed to raise any more for some time In order to dispose of the large quantity of crude they had, they must supply the wants of the world. Take ropes, for instance. They found they could not deliver them because they had not sufficient spinning machinery to manufacture in considerable quantities, and they had spent during the year several thousands of pounds in obtaining a large plant in Italy for the purpose of manufacturing more rapidly; and, secondly, they had made arrangements with the French company to which he had referred, and in which the Cape Asbestos Company had a fairly large interest. He had just returned from meeting the board of administration there, and could say they were doing fairly well. They had sold all they had manufactured up to date, and had more orders than they could execute, and were, consequently, putting up additional machinery. The French company had a very fine factory that cost £14,000, or £15,000., with machinery, and that was entirely their freehold. No doubt that company would shortly pay a dividend. The Cape Asbestos Company, however, had so used its resources in raising the crude material, that it was not as well placed, financially, as the directors were desirous of being; but they had now sufficient crude to last for years, and no doubt the financial position would improve as time went on. It was hoped that some opening would be found for the formation of companies in other countries, and in this connection he might mention that they were in correspondence with certain people in America, where asbestos was largely in use, for the supply of crude. Their mines were capable of sufficient production to supply the wants, not only of this country, but also of almost every other country. He might mention that a new use had been found for the blue asbestos in the manufacture of bicycles, for the frames and other parts of which it was eminently well suited. New uses for blue asbestos were constantly presenting themselves, and only that morning some of their asbestos was converted into a kind of artificial stone, which was absolutely indestructible, and did not rust or deteriorate with time. Nothing had occurred in the past year except to confirm the views the directors held—that the company had a new article capable of infinite possibilities, and for which orders were arriving unsolicited from all quarters, which was a proof that the article possessed superlative merits, and invited users for the special purposes he had named. They possessed a large interest in the French company without having spent any money, beyond the cost of the shares, paid for with the proceeds of the sale of about 500 tons of crude delivered to the French company. Mr. Oats then concluded by referring briefly to the balance-sheet, and inviting questions from shareholders

No questions were asked, and the motion was unanimously carried.

Mr. J. Cranmer proposed the re-election of the retiring directors (Mr. H. M Whitehead and Cavaliere A. Dellacha), which was carried, and Messrs. Cooper Bros. and Co were re-appointed auditors, on the motion of Mr. J. S. Morrison, seconded by Mr. Gideon.

The chairman, acknowledging a vote of thanks, said the directors would take no fees until a dividend was paid. They had every faith in the ultimate success of the article, and when a dividend was declared he was sure the shareholders would consider the board in a liberal spirit.

REMARKABLE INCIDENT IN LIVERPOOL.—An extraordinary scene was witnessed recently in the centre of Liverpool. A quantity of ammonia became upset in one of the top rooms on the premises of Messrs. Ayrton and Saunders, chemical manufacturers, Duke-street. It presumably came in contact with some hydrochloric acid, for twenty girls, alarmed by the fumes and fearing an explosion, climbed through a skylight on to the roof, where some hysterical scenes were enacted as the firemen carried them to a place of safety, some by way of the skylight, and others by means of a fire-escape. The incident caused great excitement.

NOTES ON THE ELECTROLYTIC DETERMINATION OF IRON, NICKEL AND ZINC.

By H. H. Nicholson and S. Avery.

THE experimental part of this work was undertaken in the spring of 1892. During the progress of the work various articles on the electrolytic deportment of these metals have been published. Some of these investigations are closely related to those carried out by us. As, however, they differ in some important particulars, and as some observations have been made which, so far as we are aware, have not as yet been reported, it seemed well to present the results obtained, although some parts of the work are still incomplete.

In the method of manipulation, free use was made of the text-books of Classen and of Smith. A number of cells of the Grove-Tyndall form furnished the current. The current was controlled by means of a rheostat-box. The amperage was determined by means of a "Weston" volt-meter. The metals were deposited in platinum dishes of 300 cc. capacity.

In no case was any attempt made to separate metals by careful regulation of the voltage as the practical utility of such methods may be doubted till the literature of the subject is more copious.

I. THE ELECTROLYTIC DEPORTMENT OF IRON.

The method of Classen and V. Reiss for the determination of the metals in their double oxalate solutions, a method which gives such admirable results in most determinations, cannot be applied with the same degree of convenience to iron, as a strong current and a hot solution are necessary.

Smith and Muir found that iron is very readily precipitated from ammonium tartrate solutions containing free ammonia. They found, however, that under such circumstances the iron contains carbon. Still tartrate solutions seemed to offer possibilities for quantitative determinations sufficient to warrant a fuller investigation of the subject.

Six grams of tartaric acid was dissolved in water and added to a solution of ferrous sulphate. The solution was then diluted to 150 c.c. and rendered strongly alkaline with ammonia. The solution was then placed in a platinum dish, submitted to the action of a current of 0·115 ampere and four volts for six hours.

Taken 0·0477 gram iron. Weight found 0·0476 gram iron.

After weighing, the precipitate was dissolved in dilute sulphuric acid. A trace of the odour of hydrocarbons was present. The solution was then oxidized; precipitated with ammonia and determined in the usual gravimetric way. The weight of the iron oxide corresponded to 0·0465 gram of iron. The carbon present evidently compensated for the weight of the unprecipitated iron.

The following determinations were made in a similar manner:—

No.	Current amperes.	Time. Hours.	Solution.	Iron taken. Gram.	Weight found. Gram.	Carbon by difference. Gram.
1	0·185	4	Strongly alkaline.	0·0620	0·0418	.....
2	0·115	14	Strongly alkaline.	0·0465	0·0487	0·0011
3	0·115	6	Slightly alkaline.	0·0291	0·0294	0·0003
4	0·5	5	Strongly alkaline	0·0476	0·0492	0·0018
5	0·5	5	Strongly alkaline.	0·0351	0·0364	0·0013

These figures show that strong currents and free ammonia are favourable to the precipitation of carbon. Hence attention was turned to the electrolysis of iron in neutral ammonium tartrate solutions.

To twenty-five c.c of an iron sulphate solution, sodium hydroxide was added till the greater part of the iron was precipitated. A dilute solution of tartaric acid was now added till the greater part of the precipitate was dissolved; five grams of ammonium tartrate were added and the whole diluted to 150 cc. The solution made up in this way was found to be exactly neutral to litmus. It was necessary to employ a stronger current than when free ammonia was present. The following determinations were made:—

No.	Current amperes.	Time. Hours.	Iron taken. Grams.	Weight found. Grams.	Iron calculated from Fe_2O_3. Grams.
1	0·4	6	0·0630	0·0634	.....
2	0·4	6	0·0630	0·0635	.....
	0·5	4¼	0·0630	0·0626	0·0620

In all cases carbon was detected in the precipitated iron.

Attention was next given to the determination of iron in sodium tartrate solutions. In some cases free sodium hydroxide was present. The sodium salt conducts the current much better than the ammonium salt. The precipitation of iron proceeds satisfactorily for a time. After a little black spots appear. When a strong current is employed a white precipitate of ferrous carbonate forms on the deposited metal. Currents of two to four volts and of 0·05 to 0·1 amperes were employed to effect the separation of the iron from the solution. Towards the end of the precipitation carbon deposits rapidly. Vortmann, by using currents of low voltage and precipitating the iron in fractions on weighed electrodes, seems to have avoided some of the unfavourable conditions above described. However, the general deportment of in sodium tartrate solutions was so unpromising that the investig was not carried further in this direction.

The question now presented itself: "Is the precipitation of ca with iron peculiar to tartrates, or may we expect it when other or compounds are present?"

To answer this question, a number of qualitative tests were mad adding to the iron solution, before passing the current, solution sugar, alcohol, glycerol, or of salts of formic, acetic, lactic, c succinic, or benzoic acids. The currents employed were of the lo voltage, and amperage sufficient to give a deposit of several millig in the course of an hour. As ammonium oxalate gives no precip of carbon under any circumstances, so far as we are aware, this rea was used to hold the iron in solution when necessary. The iron used in the form of ferrous sulphate.

When formates were present in the absence of other organic pounds, no trace of carbon could be detected in the precipitated In all other cases the precipitated iron contained carbon. In the of citric acid a quantitative determination was made.

A solution of ferrous sulphate, containing five grams of citric ac the form of sodium and potassium salts, with a little free acid, was mitted for fourteen hours to a current of 0·2 ampere.

Taken 0·0726 gram iron. Weight found 0·0740 gram iron.

The absence of carbon in the case of oxalates and formates plained by the fact that these compounds break up under the influ of the current, giving off all carbon in the form of its highest oxid product, *i.e.*, carbon dioxide.

In all cases the amount of carbon deposited was increased b employment of stronger currents, but in no case was it possib obtain a precipitate free from carbon, except in the case of for and oxalates, when organic matter was present.

DETERMINATION OF IRON IN SOLUTIONS CONTAINING AMMO OXALATE AND SODIUM BORATE.

We found that a slight modification of Classen's method gr facilitated the precipitation of iron. The following gave satisfa results:—

Twenty-five c.c. of a solution of ferrous sulphate were taken; grams of ammonium oxalate were added and brought into solutio the aid of gentle heat. Five cc. of a saturated solution of borax now added, and the entire solution diluted to 150 c.c. A curre 0·02 ampere was allowed to act on the cold solution for sixteen h Towards the end of the operation the anode became covered wi slight brown coating. A slight brown deposit also appeared on dish above the iron deposit. The following method was use dissolve these deposits: Water was added until the surface of the li was raised above the brown deposit in the dish. The positive elect was then brought in contact for a moment with the side of the thus short-circuiting the battery and generating considerable heat i electrodes. This had the effect of liberating and dissolving the br deposit. The current was allowed to act for half-an-hour longer, w the dish was removed from the circuit, washed, dried, and weighed

The precipitate was perfectly adherent, and showed no tendenc oxidize when washed with alcohol and ether. The following tabular statement of the results obtained:—

No.	Ammonium oxalate. Grams.	Saturated borax solution. cc.	Current Ampere.	Time. Hours.	Iron taken. Gram.	Iron found. Gram.
1	5	5	0·02	16	0·0938	0·0933
2	5	10	0·02	17	0·0938	0·0935
3	6	10	0·06	4	0·0938	0·0938
4	5	5	0·072	2	0·0938	0·0939
5	6	5	0·125	2	0·0938	0·0935

It will be seen from the above that the presence of borax facili the precipitation of iron in ammonium oxalate solutions. The caus the appearance of the slight brown deposit, and the extent to whic might cause an error in results, will be investigated later.

II.—THE DETERMINATION OF NICKEL.

The determination of nickel presented no difficulties. greater part of the experiments with iron were performed in analogous way with nickel; in no case was carbon deposited with nickel. When iron and nickel are deposited together as an alloy in presence of organic compounds, the nickel does not prevent the tamination of the precipitate with carbon.

III.—DETERMINATION OF ZINC.

Nearly all the published methods for the electrolytic determina of zinc give fairly satisfactory results. The tendency of the metal deposited in a spongy condition, and the liability to oxidation, are principal difficulties usually encountered.

The tendency to oxidation may be prevented by the presence formic acid in the solution, which, by the liberation of hydrogen the metal, exercises a reducing action.

By the electrolysis of zinc formate in the presence of formic Warwick did not succeed in obtaining a complete deposit.

it is greatly influenced by the presence of sodium formate in the on.

a solution of zinc sulphate three c.c. of formic acid were added, the solution partially neutralized with one gram of sodium nate. The entire solution was diluted to 150 c.c., and placed in rent of 0·02 ampere for three hours.

ken, 0·0611 gram zinc Found, 0 0603 gram zinc.

a similar manner the following determinations were made:—

o.	Formic acid. cc	Sodium carbonate. Gram.	Current. Ampere.	Time. Hours.	Weight taken.	Weight found.
	4	1 5	0 125	3	0·0611	0 0612
	5	1·0	1·000	3	0·0611	0·0611
	5	1·0	0·050	3	0·0611	0·0611

e deposit adhered well, was compact, and evenly distributed on irface of the dish; the colour was light grey, in some cases almost lic in lustre. As will be seen from the figures, a considerable ion in the strength of the current is allowable. This method is llowable in the presence of the metals of the hydrogen sulphide , as well as in the presence of iron, nickel, and cobalt.

IMPORTANT PROSECUTION UNDER THE FERTILISERS, &c., ACT.

Penkridge Police Court recently the Fish, Bone, and Waste Produce Manure Company, 10, Rumford Place, Liverpool, were ed with four offences under the Fertilisers and Feeding Stuffs Act instance of the Staffordshire County Council. The first offence for selling fertiliser manure in the month of May to Mr. Percy ster, of Stretton Mill, without giving the analysis in accordance the terms of the Act; second, for not stating at least the per- ge of nitrogen, soluble and insoluble phosphates and the potash ined in the said manure; in the third case the charge was for un- lly permitting the analysis of the manure to be false under certain ulars, in that it did not contain any soluble phosphates or potash plied in the invoice; and fourthly, with permitting the invoice ered by the defendants to be false in material particular to the dice of the purchaser by stating that the manure contained ½ to 1 ent of sulphate of potash, whereas it only contained ¼ per cent. C. I. Fisher (instructed by Mr. M. F. Blakiston, clerk to the ty Council) appeared for the prosecution, and Dr. Thomas, of pool (instructed by Messrs Grace, Smith, and Hood) repre- d the defendant campany.—Mr. Fisher said the invoice set that the constituents in the manure were: Nitrogen, to sulphate of ammonia, 2·50 to 3·5 per cent; phos- , soluble and insoluble, 8 to 10 per cent; sulphate otash, ·50 to 1 per cent. He urged that this was right guarantee under the Act, as the notice should have set forth ctual percentage of nitrogen, and that the soluble and insoluble phates ought to have been separately given, and potash, instead of ate of potash. Mr. Brewster deposed that correspondence led to rdering two tons of manure from the defendant company. Accord- o the statement of analysis on the invoice, he came to the conclu- that it meant so much nitrogen and so much potash. He com- cated with the defendant firm, and informed them of his intention aving a sample of the manure analysed. In cross-examination, ss said he was misled by the guarantee altogether. Mr. E. W. T. s, analyst to the County Council for Staffordshire, gave evidence respect to the analysis. The value of the manure was actually per ton, compared with £3. 10s. per ton, the amount paid to the by Brewster. Mr. Jones was cross-examined with a view to ing that farmers buying manures were in the habit of judging the nt of nitrogen in it by the percentage of sulphate of ammonia. witness denied that this was customary, adding that farmers did understand it. He suggested that it was very misleading. The sis of the chief analyst at Somerset House was put in, and showed the manure contained 1·17 per cent. of nitrogen, 0 13 per cent. of le phosphate, 8·53 per cent. of insoluble ditto, 0 135 per cent. of sh. Questioned with regard to this, Mr. Jones said the analyses practically the same as it only gave a mere trace of soluble phate, and he did not find sufficient potash in it to be of any tical value. He said ·13 of soluble phosphate was an absurd amount at into the certificate.—For the defence, Dr. Thomas urged that ve the amount of sulphate of ammonia was the custom of farmers purchased manure of the kind which was the subject of the present . He argued that the guarantee on the invoice was definite, and ld not mislead anybody, much less make any misrepresentation. commented upon the discrepancies of the two analyses, and pointed hat with regard to the last charge there was some potash present e manure. He suggested a great difficulty in finding the exact entage of potash in every sample submitted from such a large bulk.—Mr. Beckett, manager and member of the defendant firm, was called, and stated that by stating the percentage of sulphate of ammonia was the usual way of letting farmers know the quantity of nitrogen in the manure.—Mr. W. E. Rowlands, chemical manure manufacturer, of Seacombe, said it was impossible to get a uniform distribution over the whole bulk of the manure of any substance present only in small quantities. He maintained that farmers were used to judging the quantity of nitrogen by the amount of sulphate of ammonia stated. He produced one of his own circulars, in which the manure was guaranteed in this manner.—A fine of £20. and costs was inflicted, but, in reply to counsel, the magistrates altered the penalty to a fine of £10. on the first two charges together, and £5. each for the other two.—Notice of appeal was given.

THE MERSEY SALT SHIPMENTS.

THE salt shipments for August are by no means satisfactory, chiefly on account of the decline in the shipments to India. These show a great falling off, the figures being 12,560 tons for August, compared with 32,267 tons in the same month of last year. The previous shipments were 97,036 tons, compared with 136,244 tons last year. Decreases are shown to all parts except a slight rise in the shipments to the United States, to the West Indies, and Central and South America, to Africa, and to U K. ports. The total shipments for August amounted to 56,503 tons, compared with 72,385 tons in August, 1895. From Liverpool the shipments were 39,488 tons (compared with 62,413 tons), and from Runcorn and Weston 17,023 tons (compared with 9 940 tons) The total shipments to the end of July this year amounted to 365,265 tons, against 417,772 tons to the date in 1895. Of these shipments 259,182 tons were sent from Liverpool (compared with 309,661 tons), and 106,074 tons from Runcorn and Weston (compared with 108,111 tons).

THE MANCHESTER SEWAGE SCHEME.

AT the County Police Court, on Wednesday last, the Manchester Corporation was summoned on two informations laid by the Mersey and Irwell Joint Committee, for the pollution of the Ship Canal at Davyhulme. Counsel for the Corporation explained what was being done to dispose of the Manchester sewage, and said that the scheme would be pushed forward without delay. It would be found to be a scheme for the permanent benefit of the city, and it would certainly advance the aims of the Joint Committee. In consenting to the order, he would point out that the work could not be done within the twelve months specified. When the time came no doubt the Joint Committee would consent to an extension of the period. In making the order Mr. Yates said he was glad that terms had been arranged between the Corporation and the Joint Committee. He hoped the Corporation would be enabled to carry out their scheme, and no doubt if the work went on satisfactorily an extension of time would be granted. He imposed a fine of 20s. on the first and 1s. on the second information, with ten guineas costs.

Correspondence.

*** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

IMPURITIES IN FATS.

(To the Editor of the Chemical Trade Journal.)

SIR,—In selling my fats I am now always asked to give the percentage of impurities it contains. I should feel extremely obliged if some of your readers can give me any information as to how to estimate them.—Yours truly,

FAT BOILER.

AN UNSUCCESSFUL BONE WORKS PROSECUTION.—For the third time within twelve months Mr. George Roland, proprietor of the Nook Bone Works, Oswaldtwistle, appeared at the Church Police-court on Thursday, the 10th inst., to answer to an adjourned summons issued by the Oswaldtwistle District Council (who, it should be stated, were unwilling prosecutors, their hands being forced through the Local Government Board by a number of Oswaldtwistle memorialists) for causing a nuisance in the carrying on of an offensive trade. The magistrates came to the conclusion that nothing had been brought forward to show that the defendant had not adopted the best practicable means, and, that being so, they dismissed the summons, expressing the opinion that they might conclude there was an end of the case.

[illegible]

[illegible] Coal.—Consul Mackie, in his report [illegible] of Odessa for the year 1895, says:—The British coal trad[illegible] has not been able to recover from the blow it sustained [illegible] year ago—when, with a view to the development of coal minin[illegible] South Russia, a heavy duty of 6s., which was afterwards raised to [illegible] per ton, the present rate, was imposed on all coal imported at p[illegible] coast on the Black Sea. When duty free the influx of British [illegible] had attained the high figure of 261,600 tons, since which ti[illegible] fluctuating from year to year, it gradually fell to 92,963 tons in 1[illegible] and that, too, notwithstanding the ever-increasing demand for [illegible] fuel, consequent on the great development which has taken pla[illegible] late years in the manufacturing industries of this country, as well a[illegible] increase of coal consumption on railways and steamers, etc. Nor [illegible] there appear to be any likelihood of English coal regaining its sup[illegible] away over its Russian rival to judge by the steadily increasing quant[illegible] of the latter annually brought to Odessa, both by sea and over l[illegible] amounting in the aggregate to 196,760 tons, and thus showing [illegible] excess of no less than 102,300 tons over the British commodity.

FOREIGN REMITTANCES.

Owing to the inconvenience created by the various ways in w[illegible] foreign subscriptions are remitted, we respectfully beg to in[illegible] subscribers that a *Crossed* Money Order is the most satisfa[illegible] method of remitting, both for them and ourselves. In the case [illegible] Money Order, a letter advising us of same should always be [illegible] otherwise, owing to post-office formalities, much delay in tracing [illegible] acknowledging foreign remittances is inevitably entailed in this cou[illegible]

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are firm, and prices nominally advanced to 4*s.* 9*d.* for [illegible] and 3*s.* 4½*d.* for 50/90's, prompt. No business of importance [illegible] been done at these prices, however. Forward quotations are about [illegible] same. Carbolic acids are quiet, and in the case of 60% crude [illegible] price has fallen to 1*s.* 10*d.*, while 40% crystals stand at 6½*d.* Naph[illegible] are steady, particularly solvent, which is still quoted 1*s.* 6*d.*, and is [illegible] thereat. Crude stands at 1*s.* 3*d.* Pitch continues quiet at 31*s.*, f[illegible] East Coast. Anthracene and creosote are both steady.

Sulphate of ammonia presents an unpleasant outlook. Prices [illegible] down, and the market flat. Apart from a small prompt demand th[illegible] is really nothing doing. Nearest values are:—London outside ma[illegible] £7. 12*s.* 6*d.*, Liverpool £7. 13*s.* 9*d.*, Hull £7. 11*s.* 3*d.*, and L[illegible] £7 8*s.* 9*d.* to £7. 10*s.*

REPORT ON MANURE MATERIAL.

The market for nitrogenous material continues very dull, and pr[illegible] are barely maintained, but for mineral phosphates more money is be[illegible] asked; and, buyers being pretty well covered, much business is [illegible] induced in the United Kingdom. Owing to the difficulty in secu[illegible] freights from the American ports and higher rates being requi[illegible] shippers of mineral phosphates are experiencing much difficulty [illegible] fulfilling their contracts, and for any further business they wo[illegible] require higher prices. In consequence of this shippers of Alger[illegible] rock have also raised their quotations, and considerable business [illegible] being done to the Continent. The quotation for Florida 75/80% s[illegible] for first half 1897 steamer shipment may be put at 6½*d.* per u[illegible] delivered good United Kingdom ports, and for South Carolina a[illegible] similar grade Algerian sellers talk of about 5½*d.* per unit, but so [illegible] we have not heard of business at these advanced rates. There [illegible] nothing fresh to report in River Plate bones—£3. 12*s.* 6*d.* per ton n[illegible] therefore be considered as about the value of anything afloat or [illegible] early shipment. Quotations for Bombay bone meal and for crush[illegible] Kurrachee bones is £3. 12*s.* 6*d.* per ton for autumn shipment. Nitr[illegible] of soda is quiet at 7*s.* 10½*d.* per cwt. for ordinary, and 8*s.* for fi[illegible] quality.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business remains dull upon the whole, a[illegible] prospects do not seem to improve either for early or forward deli[illegible] There is a fair amount being done for deliveries over the coming [illegible] Bleaching powder at £6. 5*s.* nett per ton, f.o.r., and in alkali [illegible] some contracts reported at £3. 5*s.* nett, f.o.r. Caustic soda [illegible]

stands at £7. 5s, f.o.r for present delivery, and £7. 2s. 6d. for future delivery. Other strengths are offered at usual differences of price, but the tendency is towards reduction on the higher grade qualities from 74% to 77%, and it is expected that these will ultimately come into more general use on a basis of price proportionate with 70%. Chlorates have further given way, and business has been done in chlorate of soda at 5¼d. and chlorate of potash at 4¼d. per lb. Saltcake easier at 20s. per ton. Recovered sulphur steady at £4. 10s. Soda crystals and bicarbonate unchanged. Potash, caustic and carbonate, are still in good demand, and with supply being still short, prices are firm. Acetates of lime are without movement or change in values—other acetates are quiet. White powdered arsenic steady at £22. 5s nett, f.o.r. Garston. Yellow prussiate of potash unaltered at 6¼d. per lb. Cyanide, 95%, 1s. 1d. per lb. Sulphocyanides dull, and prices are lower.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OIS.—Palm oil is not much inquired for, but prices are well maintanied. There have been several sales, but most business has been done in Lagos at £ 1. spot for store or transit. Olive is moving fairly well, prices being well maintained. Linseed is flat, especially Liverpool makes, which are quoted 17s. 3d. to 18s. 6d. per ton in export barrels, according to quality. Cotton seed is steady, Liverpool refined standing at 15s. 6d. to 16s. in barrels. American is about the same at 16s. to 16s. 6d. Castor oil is quiet, the business passing being but small; prices, however, are so far maintained at last quotations. Tallow is steady and unaltered in price. Resin is firmer generally, common keeps very steady, and the tone of the higher grades has improved a little. Spirits of turpentine are the turn better, at 19s. 3d. to 19s. 6d., with a moderate demand. Petroleum is steady. American is quoted 6¼d. to 7½d., according to quality, and Russian refined 5½d. per gallon.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed at 46s. 4d.; Middlesbrough, 38s. cash, and hematite 47s. 3d. Copper, firm: Chili bars, G. O. B.'s and G. M. B's., closed at £48. to £48. 1s. 3d. cash, and £48. to £48. 5s. three months. Tin, firm: Straits closed at £58. 6s. 3d. to £58. 16s. 3d. cash, and £58. 15s. 6d. to £59. three months; Australian, £59. 10s.; English ingots, £62. to £62. 10s. Lead: Spanish, £11 3s 9d.; English, £11. 7s. 6d. Silesian spelter, ordinary, £16. 5s. Nickel, 1s. 2½d. Antimony £29. 5s. Quicksilver: First hands, £6. 10s.; second hands, £6. 9s. *Copper shares*: Cape, 2⅜ to 2½; Copiapo, 2⅜ to 2½; Libiola, 2¼ to 2½; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 24 7/16 to 24 9/16; Tharsis, 5⅝ to 5⅞.

GLASGOW, TUESDAY.—Market again strong, with fair business. Scotch done at 46s. 3d. and 46s. 4½d. cash, also at 46s. 5½d. and 46. 6d. one month; closing with buyers at 46s. 4d. cash, sellers ask 46s. 4½d. Cleveland done at 38s. cash; also at 38s. 1½d. and 38s. 2d. one month; closing with buyers at 38s. cash, sellers ask 38s. 1d. Cumberland hematite done at 47s 5d. one month, closing with buyers at 47s. 3d. cash, sellers ask 47s. 3½d. Middlesbrough hematite done at 45s. 6d. one month; closing with buyers at 45s. 2d. cash, sellers ask 45s. 3d.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The tone here is very little changed so far as the ordinary chemicals are concerned. What business there is goes on quietly but with steadiness, and prices are hardly affected at all. Bleaching powder, caustic soda, and chlorate of potash, for 1897 contracts, are all quoted a shade easier perhaps. Sulphur remains still rather scarce, though in price unaltered at £4. 15s. As regards paraffin oils for burning and solid paraffins, the situation, from the makers' point of view, is very unreliable and very unsatisfactory, owing to the causes already explained. Accompanying figures are those of the compact, but the compact is not intact, and buyers can place their orders at lower figures, if they be at the trouble to get hold of the cheaper sellers. Sulphate of ammonia is weaker, at no more than £7. 1os. prompt, Leith. It is rumoured that one maker did a sale at £7. 8s. 9d.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 21s.; borax, English, refined, £18., and boracic acid, £28. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6 7s. 6d, and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4½d. less 5%, any port; nitrate of soda, 7s. 10 d. to 8s. 1½d.; sulphate of ammonia, £7. 10s. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 5s. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; parafin wax, 120° semi-refined, 2d. to 2½d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £4. 15s., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 500 bags beet refined, and 5,928 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are quiet, with only a moderate demand. Prices are practically unchanged. Soda crystals are quoted £2. 2s 6d. per ton, gross weight, locally. Caustic 76/77% £9. and £9 5s., and 70% £7. 10s. and £7. 15s. per ton. Sulphur scarce at £4. 15s. per ton. Other products as under:—

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £2. 15s per per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3 7s. 6d. per ton, nett; soda crystals, casks, £2 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6 15s. per ton, nett; do, 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda. £30. per ton, nett.

SALT.—South Durham salt is steady at 9s. 6d. per ton, f.o.b Tees.

COALS.—Trade generally is quiet, though there is an increased consumption for gas coals, and Bunker coals are also in better demand. To-day's prices are:—Best Northumbrian steam, 8s. 3d. to 8s. 4½d. per ton; second qualities, 7s. 3d. to 7s. 6d. per ton. Small steam 3s 3d. to 3s. 6d. per ton. Bunker coals, 6s. 6d. to 6s 9d per ton. Gas coals, 6s. 9d. to 7s. per ton. Household coals, 10s. to 11s. per ton. Coke firm at 15s to 16s. per ton.

New Companies.

Chas. Hooper and Sons, Ld.—CAPITAL £100,000., in shares of £10 each. This company has been formed to enter into an agreement with Messrs. Chas. Hooper and Co., of Stonehouse, Glos., and to carry on the business of wool manufacturers, merchants, and dyers. The subscribers to the memorandum of association are:—C. H. Hooper, Eastington Lodge, Stonehouse, Glos., mfr.; H. R. Hooper, Fairmount, Ebley, Stroud, Glos., mfr.; C. A. Hooper, 11, Gt. George-street, Westminster, solr.; A. B. Hooper, Eastington Lodge, Stonehouse, Glos., mfr.; E. A. Hooper, Eastington Lodge, Stonehouse, Glos, mfr; G. H. Hooper, Abbotsholme, Rocester, Staffs, art master; E. W. Hooper, Huntingdon, land agent.

Craven, Pearson and Co., Ld.—CAPITAL £20,000., in £1. shares. This company has been formed to acquire the business of dyers, bleachers, and finishers, carried on by D. H. Thornton, R. J. Hannam, J. Marshall, C. E. Craven, and J. S. Pearson. The subscribers to the memorandum of association are:—C. H. Hannam, 24, Hillfield-road, Bradford, gent.; R. J. Hannam, Salroyd, Low Moor, Bradford, dyer; C. E. Craven, Bramley, near Leeds, dyer; J. S. Pearson, Southowram, Halifax, dyer; W. T. Craven, Bramley, near Leeds, dyer; J. Marshall, Brookfoot House, Brighouse, dyer; D. H. Thornton, Brookfoot House, Brighouse, dyer.

Tartaric Acid—
Holland, 4 pks. B. & F. Wf. Co.
Germany, 4 City Coml. Wf.
" 1 H. Lorenz
Holland, 62 Kirkpatrick & Co.

Ultramarine—
Holland, 5 cs. Hernu, Peron, & Co.
" 35 pks. Thames S. T. & L. Co., Ltd.
Belgium, 97 W. Harrison & Co
Holland, 6 cs. J. Barber & Co.
Belgium, 2 brls. J. L. Lyon & Co.
" 4 Leach & Co.

Varnish—
Belgium, 11 pks. Stobbs & Co.
U. States, 5 Dawson Brs.
Germany, 4 T. H. Lee
" 12 Taylor Brs.

White Lead—
Holland, 40 cks. A. & M. Zimmermann
Germany, 22 H. B. Alder & Co.
France, 19 J. Watt & Son
Belgium, 20 Burrell & Co
Germany, 29 W. A. Rose & Co.
Belgium, 16 brls. J. L. Lyon & Co.

Wood Pulp—
Holland, 17 pks. Hernu, Peron, & Co.
Sweden, 320 W. G. Taylor & Co.
Austria, 50 Thames S. T. & L. Co.
Holland, 270 brls. Phillipps & Graves
Norway, 1,600 pks. J. Sharp
N. Russia, 67 Thames S. T. & L. Co.
Germany, 65 "
Norway, 164 Becker & Co.
" 1,000 Moreton Cox Brs.
" 1,423 E. J. & W. Goldsmith
" 800 Tough & Henderson
Belgium, 1,410 E. J. & W. Goldsmith

Zinc Oxide—
Germany, 50 brls. M. Ashby, Ltd.
Holland, 129 "
Germany, 500 cks. Soundy & Sons
Holland, 51 Burrell & Co.
Belgium, 5 O'Hara & Hoar
Holland, 125 J. Matton

LIVERPOOL.

Week ending September 3rd.

Acetic Acid –
Rotterdam, 10 balloons

Aluminous Cake—
Rotterdam, 93 cks.

Barytes—
Antwerp, 63 cks. 215 bgs.
Rotterdam, 64

Bone Meal—
Karachi, 9,293 bgs.

Castor Oil—
Marseilles, 24 cs, 220 brls.

Chemicals (*otherwise undescribed*)
Hamburg, 1 cs.

Colours—
Rotterdam, 2 cs.
Hamburg, 3 cks.

Cream of Tartar—
Oporto, 3 cks.

Dyestuffs—
Cochineal
Teneriffe, 16 bgs. Brown Brs. & Co.
Divi Divi
Hamburg, 271 bgs.
Extracts
Hamburg, 40 bgs.
Fustic
Tampico, 2,875 ps. W. H. Thompson & Co.
Colon, 101 Widow, Duranty & Son
Tampico, 4,989 Heaven Wedemeyer
Myrabolams
Bombay, 7,150 bgs.

Farina—
Stettin, 50 bgs.

Glucose—
New York, 449 brls.
Baltimore, 50

Glue—
Rouen, 10 cks. R. J. Francis & Co.
Marseilles, 25 cs.
Rotterdam, 1

Infusorial Earth—
Hamburg, 67 bgs.

Lamp Black—
Gothenburg, 1 brl. 1 cs.
New York, 10
Boston, 10

Limestone—
Antwerp, 4 crts.

Manganese—
Hamburg, 1 ck.

Mica—
New York, 14 brls.

Minium—
Rotterdam, 51 cks

Molasses—
Alexandria, 500 brls.

Ochre—
Rouen, 77 cks. R. J. Francis & Co.
Marseilles, 10 brls. Birmingham Colour Co.
Bombay, 62

Oxalic Acid—
Rotterdam, 4 cks.

Paint—
Boston, 50 cs. Bahr, Behrend & Ross
" 23

Paraffin Scale—
Philadelphia, 760 brls.
Baltimore, 100

Phosphate –
Antwerp, 341 t. 80 bgs.

Pitch—
Marseilles, 106 brls.
Dunkirk, 29 cks.

Pitch Oil –
Rotterdam, 40 cks.

Potash—
Antwerp, 20 dms.

Pyrites—
Huelva, 6,857 t. Matheson & Co.

Rosin –
Boston, 100 brls.
Brunswick, Ga., 2,829

Saltpetre—
Hamburg, 4 cks.

Soap—
New York, 2 cs. Burroughs, Welcome & Co.
Bombay, 82
Boston, 4 Barclay & Sons

Soapstone—
Bordeaux, 300 bgs. G. G. Blackwell, Sons & Co.

Starch—
Antwerp, 430 cs.
New York, 100 bgs.
Boston, 150 J. Bartels & Co.
" 1,300
Bremen, 15
Antwerp, 148 J. T. Fletcher & Co

Stearine—
New York, 50 hds. Co.-op. W'sale Society, Ld.
Antwerp, 6 bgs. 13 cs. J. T. Fletcher & Co.
Boston, 25 tcs.
St. John's, N'fld., 5 cks. Dundee Arctic Fishery Co.
Bordeaux, 50 bgs.
Antwerp, 43

Tallow—
Boston, 28 hds. 300 tcs
Baltimore, 240

Tartar—
Bordeaux, 29 cks.
Hamburg, 10

Treacle—
Bordeaux, 2 cs.

Turpentine—
Brunswick, Ga., 1,097 brls.

Varnish—
Antwerp, 1 kg.
Rotterdam, 1 ck.

White Lead—
Rotterdam, 25 cks.
Genoa, 16 brls.

Wood Pulp—
Gothenburg, 151 bdls. G. F. Green & Co.
" 36 pks. Schenkenwald & Co.
New York, 15 cs. Lancstaff & Co.
Rotterdam, 323 bls.

Zinc Ashes—
Rouen, 20 cks. Co-op. W'sale Society, Ld.
Boston, 14 brls.

Zinc Oxide—
Antwerp, 15 brls.

Zinc White—
Rotterdam, 106 cks.
Stettin, 50 M. Ashby, Ld.

MANCHESTER.

Week ending September 5th.

Acetanilide—
Rotterdam, 5 cs.

Acetic Acid—
Copenhagen, 31 dmjhns.
Rotterdam, 10 blns.

Aluminous Cake—
Rotterdam, 107 cks.

Ammonium Chloride—
Antwerp, 4 brls.

Antimony Salts—
Rotterdam, 10 sks.

Barytes—
Antwerp, 10 cks. 50 bgs.
Rotterdam, 24 200

Chemicals (*otherwise undescribed*)
Rotterdam, 3 cs.

Colours—
Antwerp, 8 cks. 6 pks.
Rotterdam, 21 23 cs. 25 bxs. 138 brls.
Hamburg, 6 10

Dyestuffs (*otherwise undescribed*)
Antwerp, 7 cks. 11 bgs.

Farina—
Stettin, 250 bgs. Brown, Geveke, & Co.
" 690
Hamburg, 100

Glucose—
Stettin, 200 bgs.

Glue—
Stettin, 10 bgs.
Treport, 75 bls.
Rotterdam, 30 1 cs.
Antwerp, 7 pks. 5
Hamburg, 5 cks.

Lead Acetate—
Stettin, 8 cks.

Limestone—
Antwerp, 1 cs.

Litharge—
Rotterdam, 7 cks.

Lithopone—
Stettin, 33 cks.
Rotterdam, 40

Naphtha—
Antwerp, 13 dms.

Potash –
Treport, 48 cks.

Potassium Chloride—
Hamburg, 40 cks.

Starch—
Rotterdam, 135 cs.
Antwerp, 200

Stearine—
Antwerp, 6 bgs.

Tartaric Acid—
Rotterdam, 6 cks.

Waste Salt—
Hamburg, 3 bgs.

White Lead—
Antwerp, 6 cks.

Wood Pulp—
Copenhagen, 100 bls. H. B. Wood
Gothenburg, 3,837
Christiania, 4,285 W. H. Ingram
Drammen, 2,495 192 cs. "

Zinc Ashes—
Rotterdam, 1 ck.

Zinc Oxide—
Antwerp, 15 brls.
Rotterdam, 45 cks.

Zinc White—
Rotterdam, 25 cks.

HULL.

Week ending September 5th.

Acetic Acid—
Rotterdam, 10 blns. Hutchinson & Son

Alkali—
Bremen, 1 kg. 1 cs. Veltmann & Co.
Amsterdam, 2 cks. Hutchinson & Son

Alum –
Rotterdam, 72 cks. W. & C. L. Ringrose

Barytes—
Rotterdam, 23 cks. Hutchinson & Son
Antwerp, 29 20 bgs. Bailey & Leetham
Amsterdam, 48 Hutchinson & Son
Hamburg, 91 Blundell, Spence, & Co.

Camphor—
Hamburg, 1 ck. Wilson, Sons, & Co., Ld.
133 tubes

Chemicals (*otherwise undescribed*)
Bremen, 8 cs. Veltmann & Co.
Dantzic, 17 cks. Wilson, Sons, & Co., Ld.
Antwerp, 4 pks "
Dunkirk, 98 dms. "
Hamburg, 8 cks. "

Cod Oil—
Hamburg, 57 brls. Wilson, Sons, & Co., Ld.
Aalesund, 15 "
Bergen, 18 cks. "

Colours—
Hamburg, 26 cks. Wilson, Sons, & Co., Ld.
Antwerp, 1 Bailey & Leetham
" 10 14 pks. Wilson, Sons, & Co., Ld.
Stettin, 24
Rotterdam, 16 brls. W. & C. L. Ringrose
3 bxs. 35 pks.
Dunkirk, 26 Wilson, Sons, & Co., Ld.
Hamburg, 1 ck.

Cryolite—
Copenhagen, 5 cks. Wilson, Sons, & Co., Ld.

Dextrine—
Stettin, 60 bgs.

Dyestuffs—
Alizarine
Rotterdam, 29 cks. W. & C. L. Ringrose
23 brls. 3 bxs.
Valonia
Smyrna, 103 t.

Farina—
Ghent, 10 bgs. Wilson, Sons, & Co., Ld.
Stettin, 70
Harlingen, 600 W. & C. L. Ringrose
" 300 Hutchinson & Son

Glucose—
Stettin, 200 bgs. Wilson, Sons & Co., Ld.
New York, 250 100 brls.

Glue—
Rouen, 19 cks. Rawson & Robinson
Antwerp, 3 Bailey & Leetham
Stettin, 8 bkts. Wilson, Sons, & Co., Ld.

Lithopone—
Amsterdam, 20 cks. Hutchinson & Son

Minium—
Rotterdam, 7 cs. Hutchinson & Son

Nickel Salt—
Rotterdam, 2 cks. Hutchinson & Son

Ochre—
Rouen, 88 cks. Rawson & Robinson

Paint—
New York, 10 cs. 1 bx. Wilson Sons, & Co., Ld.

Phosphorus –
Hamburg, 1 cs. Wilson, Sons, & Co, Ld.
New York, 25 cs. "

Pitch—
Amsterdam, 25 cks. Hutchinson & Son

Potash—
Rotterdam, 6 cks. W. & C. L. Ringrose

Quicksilver—
Hamburg, 3 jars 2 tins Wilson, Sons, & Co., Ld.

Starch—
Bremen, 2,354 cs. Veltmann & Co.
Ghent, 313 pks. Wilson, Sons, & Co. Ld.
Antwerp, 164 Bailey & Leetham
,, 170 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 73 bgs. Wilson, Sons, & Co., Ld.

Tallow—
Hamburg, 1 brl Wilson, Sons, & Co., Ld.
New York, 50 hds. ,,
Antwerp, 1 ,,

Tar—
Drontheim, 49 brls. Wilson, Sons, & Co., Ld.

Treacle—
Bergen, 1 brl. Wilson, Sons, & Co., Ld.
New York, 678 ,,

Ultramarine—
Rotterdam, 4 cks. W. & C. L. Ringrose

Waste Salt—
Hamburg, 50 bgs. Wilson, Sons, & Co., Ld.

White Lead—
Antwerp, 11 cks. Bailey & Leetham
Amsterdam, 53 W. & C. L. Ringrose
Rotterdam, 121 Hutchinson & Son

Wood Pulp—
Gothenburg, 449 bls. Wilson, Sons, & Co., Ld.
Drontheim, 592 ,,
Christiania, 1,8.6 ,,
Helsingfors, 195 J. Good & Sons

Zinc Oxide—
Antwerp, 5 cks.
,, 5 Morley & Co.

GLASGOW.

Week ending September 10th.

Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son

Aniline—
Rotterdam, 8 bxs. 5 brls.

Aniline Colours—
Hamburg, 15 cks. 3 cs.

Aniline Salts—
Rotterdam, 11 cks. J. Rankine & Son

Antimony Salt—
Rotterdam, 1 ck.

Barium Sulphate—
Antwerp, 405 bgs.

Barytes—
Rotterdam, 21 pks.

Bone Meal—
Bombay, 3,276 bgs.
Calcutta, 2,240

Castor Oil—
Marseilles, 838 brls. 18 pks.
Antwerp, 44 cks.

Chemicals *(otherwise unenumerated)—*
Rotterdam, 1 ck. 2 cs. J. Rankine & Son

Chromium Fluoride—
Rotterdam, 1 bx

Colours—
Rotterdam, 8 cks. J. Rankine & Son
,, 8 pks.
Hamburg, 7

Cottonseed Oil—
Baltimore, 50 brls.

Cream of Tartar—
Marseilles, 13 cks.

Dyestuffs—
Alizarine
Rotterdam, 2 brls. J. Rankine & Son
,, 8 pks.
Cutch
Colombo, 80 pks.
Madder
Marseilles, 13 cks.
Myrabolams
Bombay, 333 bgs.

Farina—
Hamburg, 64 bgs.

Glue—
Rouen, 15 bls. 29 cks. 13 cs.
Rotterdam, 6 cs. J. Rankine & Son

Guano—
Tromsoe, 1,400 bgs.

Gypsum—
Rouen, qty.

Lead Acetate—
Hamburg, 20 cks.

Minium—
Rotterdam, 14 cks. J. Rankine & Son

Ochre—
Marseilles, 36 brls.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paint—
Marseilles, 20 cs.

Plumbago—
Colombo, 580 brls.

Potash—
Rotterdam, 30 cks. J. Rankine & Son

Potassium Chlorate—
Rouen, 16 cks.

Potassium Prussiate—
Antwerp, 2 cks.

Pyrites—
Huelva, 1,804 t. Tharsis Co.

Rosin—
Brunswick, 1,183 brls.

Saltpetre—
Calcutta, 1 bx.

Soap—
Rouen, 30 cs.
Marseilles, 1

Sodium Nitrate—
Rotterdam, 8 cks. J. Rankine & Son

Stannate of Soda—
Hamburg, 2 cks.

Starch—
Rotterdam, 26 cs. J. Rankine & Son
Antwerp, 200
Ghent, 16

Stearine—
Amsterdam, 124 bgs.

Sulphur Chloride—
Rotterdam, 17 carboys J. Rankine & Son

Ultramarine—
Rotterdam, 3 cs. J. Rankine & Son

Waste Salt—
Hamburg, 152 t. 266 cks.

White Lead—
Rotterdam, 57 cks. J. Rankine & Son

Wood Pulp—
Hamburg, 50 bls.
Christiansand, 1,102 J. T. Salveson
Christiania, 808 20 cs.

Zinc Oxide—
Antwerp, 40 cks.
Hamburg, 25
Rotterdam, 25 J. Rankine & Son

Zinc White—
Rotterdam 25 cks.
,, 350 J. Rankine & Son

TYNE.

Week ending September 5th.

Barytes—
Rotterdam, 23 cks. Tyne S. S. Co.
Antwerp, 225 bgs. ,,

Colours—
Rotterdam, 4 brls. Tyne S. S. Co.

Glue—
Rotterdam, 10 bgs. Tyne S. S. Co
Antwerp, 2 cks. ,,

Limestone—
Antwerp, 5 cs. Tyne S. S. Co.

Paint—
Antwerp, 2 dms. Tyne S. S. Co

Phosphate—
Antwerp, 530 t. Langdale's Chemical M. Co.

Pitch—
Rotterdam, 13 cks. Tyne S. S. Co.

Plumbago—
Hamburg, 6 cks Tyne S. S. Co.

Pyrites—
Huelva, 3,262 t.

Salt—
Harburg, 320 t.

Starch—
Rotterdam, 120 cs. Tyne S. S. Co.
Antwerp, 90 ,,

Tar—
Archangel, 1,401 brls. R. Hood, Hagele, & Co.

Tartaric Acid—
Rotterdam, 10 cks. Tyne S. S. Co.

Wood Pulp—
Copenhagen, 160 bls.
Christiania, 240
Holmestrand, 1,000
Arendal, 126
Gothenburg, 122 pks.

Zinc Oxide—
Antwerp, 12 brls. Tyne S. S. Co.

GOOLE.

Week ending September 2nd.

Alizarine—
Rotterdam, 112 cks. 1 cs.

Alkali—
Calais, 19 cks.

Alum—
Rotterdam, 65 bgs.

Aniline—
Rotterdam, 228 cks. 130 cs.
Hamburg, 2
Amsterdam, 8

Barytes—
Antwerp, 200 bgs.

Caoutchouc—
Boulogne. 3 bx

Coal Products *(otherwise unenumerated)*
Boulogne, 1 ck.

Colours—
Hamburg, 8 cs.

Dyestuffs *(otherwise unenumerated)*
Rotterdam, 47 cks. 25 cs.
Boulogne, 7 1

Farina—
Antwerp, 20 bgs.
Hamburg, 170
Delfzeyhl, 395

Glucose—
Calais, 200 bgs.

Madder—
Rotterdam, 10 cks.

Potash—
Rotterdam, 50 cks.
Antwerp, 20 dms.
Dunkirk, 13 100
Calais, 7

Pyrites—
Huelva, 345 t.

Saltpetre—
Rotterdam, 200 bgs.

Soda—
Rotterdam, 16 cks.

Starch—
Ghent, 290 cs.

Tartar—
Antwerp, 2 cks.

Ultramarine—
Rotterdam, 1 ck.

Waste Salt—
Hamburg, 463 cks. 200 bgs.

Wood Pulp—
Fredrikshald, 1,744 bls.

GRIMSBY.

Week ending September 5th.

Caoutchouc—
Antwerp, 1 cs.
Hamburg, 1

Chemicals *(otherwise unenumerated)*
Rotterdam, 20 cks
Hamburg, 3 cs.
Antwerp, 1 pk

Colours—
Hamburg, 8 cks 3 cs. 32 pks.
Antwerp 8 75

Dyestuffs *(otherwise unenumerated)*
Dieppe, 9 cks

Farina—
Hamburg, 50 bgs.

Pitch—
Dieppe, 10 cks.

Starch—
Antwerp, 50 cs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 9th.

Acidine—
Melbourne, 10 c. £27

Alkali—
Auckland, 5 t. £33
Lyttelton, 5 9 c. 23
Tampico, 77 14 650

Ammonium Carbonate—
Sydney, 15 cs. £25
Yokohama, 10 cks. 50
Cologne, 21 t. 8 87
Rouen, 3 10 c. 140
Odessa, 10 265

Ammonium Chloride—
B. Ayres, 2 t. 10 c. £54
Stamboul, 10 brls. 36
Bourgas, 12 20
Odessa, 3 105

Ammonium Sulphate—
Surinam, 17 t. 19 c. £133
Mauritius, 300 2,438
Hamburg, 922 1,715
Treport, 50 360
Genoa, 30 225
Bremen, 57 438
Canaria, 23 185

Amorphous Phosphorus—
Melbourne, 1 cs. £22

Bisulphite of Lime—
Sydney, 10 t. £57

Borax—
Madras, 3 c. £11

Calcium Chloride—
Brisbane, 20 drs. £21

Carbon Bisulphide—
Hamburg, 19 drs £54

Carbonic Acid Gas—
Cape Town, 26 tubes £83
Jersey, 35 13
Wellington, 22 cs. 120

Caustic Soda—
Natal, 2 t. 19 c. £46
Melbourne, 4 7 164
Algoa Bay, 5 18 170
Mexico City, 10 5 90
Sydney, 7 3
Auckland, 5 1
Brisbane, 21 9 83
Hobart, 6 29 31

Chemicals *(otherwise unenumerated)*
Bombay, 20 cks. 34 cs. £178
Christiania, 1 t. 4 c. 22
Sydney, 8 pks. 3 32
Auckland, 4 cks. 20
Mauritius, 130 100
Perth, 2 kgs. 19 47
Hamburg, 5 13 180
Treport, 5 8 180

Melbourne, 9 14 2 pks.
15 kgs. 476
Las Palmas, 2 drs. 12

Citric Acid—
St. Petersburg, 1 t. £135
Melbourne, 10 c. 64
Delagoa Bay, 15 100
Genoa, 2 10 315
Lisbon, 5 cks. 35
Brussels, 1 31
Calcutta, 2 cs. 2 29
Hamburg, 10 kgs. 65
Rotterdam, 18 111
Montreal, 5 32
Yokohama, 1 128
B. Ayres, 5 35

Coal Products—
Aniline Dye
Melbourne, 8 pks. £42
Aniline Oil
Genoa, 20 drs. £1,000
Anthracene
Dusseldorf, 53 cks. £345
Benzol
Amsterdam, 49 cks. £329
Antwerp, 50 180
Rotterdam, 73 47 puns. 1,570
Carbolic Acid
Rotterdam, 161 cks. £1,260
Creosote
Dieppe, 46 500 galls. £243
Danzig, 100 cks. 55
Creosote Oil
Gothenburg, 250 cks. £210
Danzig, 100 brls. 80
Creosote Salts
Philadelphia, 660 bgs £170
Naphtha
Treport, 78 cks. £200
Naphthaline
Aden, 4 cks. £19
Rotterdam, 200 bgs. 110
Pitch
Hochfeld, 295 t. £598
New York, 300 cks. 100 brls. 233
Sydney, 25 14
Tar
Pt. Elizabeth, 400 drs. £35
Tar Oil
Messina, 4 cks. £15

Coal Products (*otherwise undes.*)—
Alexandria, 400 brls. £160
Frontera, 20 cks. 27

Copper Sulphate—
Odessa, 10 t. £171
Treport, 5 80

Cream of Tartar—
Perth, 10 c. £47
Sydney, 20 kgs. 87
Adelaide, 13 57
Hiogo, 10 50
Melbourne, 50 10 266
Brisbane, 2 t. 200

Disinfectants—
Madras, 18 c. £16
Christchurch, 3 t 9 77
Montreal, 5 cks. 18
Bombay, 70 63
Algoa Bay, 34 50
Alexandria, 25 175

Disinfectants and Sheep Dip—
Fremantle, 21 cs. £46

Guano—
Guadeloupe, 50 t. £550
Trinidad, 40 400

Manure—
Bundaberg, 100 t. 7c. £40
Hamburg, 49 5 130
Huelva, 76 2 305
St. Kitts, 5 50
Colombo, 42 10 263
Rouen, 125 424
Malaga, 1 16 17
Lyttelton, 125 370

Oxalic Acid—
Dunedin, 2 cks. £23

Phosphate—
Treport, 20 t. £130

Phosphide of Calcium—
Bombay, 2 cs. £11

Phosphoric Acid—
Surinam, 11 t. 5 c. £170

Potash Crystals—
Toronto, 3 cs. £30

Potash Salts—
Auckland, 5 t. 2 c. £664

Potassium Bicarbonate—
Philadelphia, 1 t. 3 c. £29

Potassium Bichromate—
Piræus, 1 t. 5 c. £57

Potassium Chlorate—
Mauritius, 10 t. 4 c. £93

Potassium Cyanide—
Sydney, 10 c. £65
Melbourne, 4 t. 460
Delagoa Bay, 1 16 198

Potassium Nitrate—
Melbourne, 1 t. £21

Potassium Prussiate—
New York, 30 cks. £544

Saltpetre—
Amsterdam, 1 t. 17 c. £38
Sydney, 1 24
Rio de Janeiro, 2 4 49
Santos, 6 12 145
Syra, 4 2 86
Surinam 20 19 290

Salts of Potash—
Delagoa Bay, 7 t. 1 c. £663

Sheep Dip—
Algoa Bay, 3,150 drs. £1,006
Natal, 1,000 197
Melbourne, 500 50 cks. 563
B. Ayres, 1,050 69 bgs. 1,446 cs.
30 t. 4 c. 2,874

Slag—
Pt. Elizabeth, 25 t. £61
Surinam, 50 95

Soda Alkali—
Rotterdam, 5 t. 9 c. £31

Soda Crystals—
Sydney, 53 t. 13 c. £117
Newcastle, 15 31
Cape Town, 2 8 6

Soda Salts—
Melbourne 1 t. 2 c. £42

Sodium Bicarbonate—
Perth, 11 c. £4
Auckland, 5 t. 5 32
Invercargill, 2 13
Dunedin, 1 7

Sodium Prussiate—
Hamburg, 3 cks. £57

Strontium Nitrate—
New York, 3 t. 8 c. £80

Sulphur—
Mossel Bay, 250 kgs. £125
Brisbane, 10 brls. £6

Sulphuric Acid—
Beira, 20 cs. £27

Superphosphates—
Canaria, 7 t. 10 c. £29

Tartaric Acid—
Perth, 4 c. £21
Sydney, 60 kgs 10 432
Melbourne, 1 t. 10 187
Adelaide, 1 5 155
Yokohama, 3 1 417
B. Ayres, 1 140
Hamburg, 10 65
Lisbon, 5 32

LIVERPOOL.

Week ending September 9th.

Acetic Acid—
Lisbon, 2 t. £30

Albumen—
Hamburg, 10 c. 2 q. £20
Barcelona, 2 2 8

Alum—
Fremantle, 5 c. 3 q. £1 5s.
Galatz, 3 t. 11 3 22
Ibrail, 2 3 1 13
Oporto, 4 17 22

Alumina Ferric—
Alexandria, 7 t. 8 c. £29

Aluminous Cake—
Calcutta. 14 t. 3 c. 1 q £43
Rio de Janeiro, 8 10 31

Ammonium Carbonate—
Odessa, 2 t. £64
Havana, 10 c. 18
Rangoon, 15 24
Adelaide, 9 3 15
Riga, 9 3 q 14
Carthagena (Sp.), 10 14
Oporto, 10 3 14

Ammonium Chloride—
Malaga, 19 c. 1 q £35
Venice, 10 15
Antwerp, 5 2 7
Copenhagen, 5 t. 4 106
B. Ayres, 13 25
Calcutta, 3 15 126
Trieste, 1 2 33
Ibrail, 1 35
Galatz, 16 29
Genoa, 6 9
Smyrna, 1 2 38

Ammonium Sulphate—
Palermo, 20 t. 1 q. £154
Valencia, 15 9 c. 2 120
Montreal, 15 7 3 120

Antimony Sulphide—
Madeira, 9 c. £2

Bleaching Powder—
Baltimore, U.S., 270 bgs.
Baltimore, 21 cks. 100 bxs.
Boston, 95
Delagoa Bay, 3 cs.
Genoa, 118
Ghent, 27
Havana. 25 brls.
Leghorn, 10
N. Orleans, 13
New York, 297
Rio de Janeiro, 13
Rouen, 30
Newport News, 2 t. £40

Bone Waste –
Rouen, 3 t. 14 c. £26

Boracic Acid—
Paris, 2 t. £60
Rotterdam, 11 c. 1 q. 15
Mazatlan, 2 2 5

Borax—
Valencia, 1 t. 15 c. £35
Mexico City, 1 31
Montreal, 15 4 305
Amsterdam, 2 5 43
Dunedin, 10 11
Cadiz, 1 7 24
Rotterdam, 16 13 3 q. 338
Dantzic, 6 13 2 130
Toronto, 15 9 2 312
Stettin, 2 12 3 52
Venice, 1 29
Hamburg, 6 16 2 135

Calcium Chloride—
New York, 10 t. £25
Odessa, 9 19 c. 23
Alexandria, 4 19 11
Lisbon, 5 1

Carbolic Acid—
Baltimore, 7 cs. £28
New York, 10 cks. 80
Mazatlan, 2 c. 3 q. 13
Newport News, 4 t. 14 1 231
Rouen, 3 6 2 28
Hamburg, 16 1 724

Caustic Potash—
Rio de Janeiro, 6 c. £8
Chicago, 6 t. 4 160
Sydney, 10 15

Caustic Soda—
Alexandria. 64 dms.
Alicante, 103
Antwerp, 14 27 brls.
Baltimore, 75 125 pks.
Barcelona, 270 100 45
Bilbao. 120
Bombay, 40
Bordeaux, 31
Boston. 130
B. Ayres, 50
Calcutta, 53
Callao, 140
Ceara, 10
Cape Town, 14
Cartagena, 50 10 cks
Copenhagen, 35
E. London, 9 cs.
Genoa, 333
Hamburg, 91 25
Karachi, 12
Konigsberg. 288 & qty.
La Libertad, 80
Leghorn, 114
Madeira, 5
Malta, 18
Marseilles, 124
Monterey, 3
Melbourne, 72
M. Video, 20
Nagasaki, 40
Naples, 50
N. Orleans, 310
Newport News 50 24 brls.
New York, 350
Oporto, 45
Penang, 10
Pernambuco, 25
Port Natal, 7
Quebec, 125
Rangoon, 40
Rio de Janeiro, 44
Riga. 556
Rio Grande 60
St. Petersburg 7 cks.
Santander, 45
San Jose de
Guatemala, 10
St. Louis, 60
Santos, 10
Sydney, 30 90 pks.
Trieste, 30
Vera Cruz, 50
Vigo 40
Volo, 40
Yokohama, 80
Fairwater, 35

Chemicals (*otherwise undescribed*)
Odessa, 5 t. 10 c. £169
Bombay, 14 1 3 q. 83
Sydney, 118 4 240
Bordeaux, 2 cs. 6
Rio de Janeiro, 30 brls. 6
Amsterdam, 6 10
Alexandria, 12 2 q. 20
Syra, 4 7
Mersyne, 4 7
Konigsberg, 1 2 36
New York, 3 9 114
Philadelphia, 13 17 455
Boston, 10 18 3 617
,, 40 brls.
Montreal, 20 30 kgs.

China Clay—
Bahia, 18 cks.
Barcelona, 593 bgs.
Bombay, 90
Boston, 1,337
Montreal, 40
Philadelphia, 200
Rio de Janeiro 40 cs.

Chromium Trioxide—
Bombay, 2 c. £6

Coal Products—
Aniline Oil
Barcelona, 1 dm.
Aniline Salts
Boston, 15 cans
Carbolic Acid
Newport News, 37 brls.
Pitch
Cette, 1,205 t.
Rotterdam, 1 tub
Rouen, 2 cks.
Tocopilla, 13 brls. 10 dms.
Valparaiso, 20
Tar
Callao, 10 brls.
Cartagena (Sp.) 20 kgs.
Ogowe, 1
St. Johns, N'fld., 110
Wellington, N.Z., 20 dms.

Cobalt Oxide—
Leghorn, 1 c. 1 q. £35

Copper Sulphate—
Paris, 4 t. 18 c. 2 q. £81
Rouen, 3 4 51
Santander, 14 18 1 231
Galatz, 5 81
Ibrail, 3 54
Bari, 22 16 1 378
Porto Rico, 2 16 49
Palermo, 5 8 3 112
Amsterdam, 1 15 1 31

Disinfectants—
Rangoon, 10 c. £2
New York, 1 t. 10 55

Indigo Waste—
New York, 12 t. 11 c. £270

Lime—
Porto Novo, 6 t. 12 c. £16

Magnesia—
Lisbon, 1 q. £36

Magnesium Carbonate—
Mexico City, 4 c. £6
Tampico, 13 1 q. 14

Magnesium Sulphate—
Montreal, 20 bgs.

Manganese Borate—
Montreal, 10 c. £24

Manure—
Havre, 250 t. 5 c. £950
Gd Canary, 20 80
St. Nazaire, 1,500 5 4,762
Rouen, 39 15 240
Genoa, 356 1 q. 1,748
Las Palmas, 20 104

Muriatic Acid—
Porto Alegre, 3 c. 7s.

Nitric Acid—
Rangoon, 2 c. £15
Porto Alegre, 2 2 q. 6

Oxalic Acid—
Barcelona, 5 t. 17 c. £173
B. Ayres, 2 4
Boston, 5 14 157

Oxide of Iron—
Paris, 2 t. 15 c. £40

Paint—
Accra, 28 cs. 12 kgs.
Antwerp, 30 dms.
B. Ayres, 15 cks. 125
Calcutta, 21 60
Cameroons, 1
Colon, 32 pks.
Havana, 3 25
Havre, 8
Lagos, 26
Lisbon, 6 30
Rotterdam. 5 124
St. John, N'fld., 120 26 brls.
San Benito, 3
St Thomas, 50 138 pks.
Sierra Leone, 1 cs.
Valparaiso, 2412
Wellington, N.Z., 105 pkgs.

Painters' Colours—
Algoa Bay, 4 cks. 32 kgs. 1 roll
Barcelona, 1 cs.
Beyrout, 122
Boma, 18 22 dms.
B. Ayres, 20
Coquimbo, 15 brls.
Constantineple, 13 bxs.
Genoa, 30 bgs.
Leghorn, 8 cs. 1
Manaos, 7 tcs. 8 6 brls.
Manilla, 125
M. Video, 1 cs.
Montreal, 4 30 94
Para. 8 100
Pt. Elizabeth, 120 dms.
Porto Novo, 10
San Francisco, 7 brls.
Shanghai, 1 cs.
Syra, 6
Tampico 4
Tangiers, 1 84
Vigo, 22

Paraffin Wax—
Piræus, 5 cs.

Phosphorus—
Hiogo, 1 t. 7 c. £340
Yokohama, 8 125

Potassium Bichromate—
Syra, 10 c. £20
Smyrna, 4 t. 10 195
Ghent, 16 32
Mexico City, 9 2 q. 4
Bari, 1 1 3 42
Ancona, 7 9 8

Potassium Carbonate—
New York, 8 t. 19 c. £160
Chicago, 1 8 29
Bombay, 5 7
Newport News, 2 11 70

Potassium Chlorate—
Gutujewsky, 10 t. £450
Rotterdam, 20 c. 20
St. Petersburg, 5 192
New York, 3 15 241
Tampico, 2 10 103
Philadelphia, 7 10 283
Copenhagen, 1 40
Lisbon, 5 10
Santos, 10 20
Amsterdam, 1 40
B Ayres, 5 2 q. 10
Odessa, 8 16
Hiogo, 12 10 480
Genoa, 1 38
Antwerp, 5 10
Hamburg, 10 10 430
Libau, 9 16 389

Potassium Silicate—
Amsterdam, 1 t. 5 c. £10

Potassium Tartrate—
Mazatlan, 4 c. £17

Salt—
Accra, 1 t. 3¾ c.
Adelaide, 1 1
Amsterdam. 120
Antwerp, 190 10
Baltimore, 600
Banoka, 4 10
Barbadoes, 30
Batanga, 7 10
Boston, 166
Brisbane, 75
B. Ayres, 234 3
Cabenda, 2 cars
Cameroons, 108 5
Cape Coast. 10
C. C. Castle, 37
Egwanga, 20
Fuca W.C.A., 20
Ghent, 275
Gijon, 5
Halifax, 10
Kissanga, WCA 30
Loango, 11 12
Matadi, 5 14
Montreal, 296
Newcastle, N S. 200
Newcastle, 20
N. Orleans, 858
Newport News, 495
New York, 326
Noqui, 91 13
Old Calabar, 120
Opobo, 64
Orebak, 153
Para, 35 14
Philadelphia, 600
Rio Del Rey, 63 14
Rotterdam. 130
St. John's N'fd., 5
Salt Pond. 11 3
San Francisco, 200
St. John's, N'fld. 10
Sydney. 350
Trinidad, 36 11
Ukaka, 18 15 500 bgs.
Valparaiso, 203
Lagos, 2,602

Salt Cake—
Antwerp, 133 t. 14 c. £190

Saltpetre—
Bahia, 11 c. £12
Pernambuco, 2 t. 17 1 q. 115
Mollendo, 6 8

Sheep Dip—
Orebak, Iceland, 2 c. 3 q. £5
B. Ayres, 20 t. 15 655

Soap—
Accra, 5 bdls.
Alexandria, 40 bxs. 55 cs.
Algoa Bay, 12
Ambrizette, 30
Amsterdam, 375
Antigua, 50
Antwerp, 1,500
Barbadoes, 500
Batavia. 3,000
Bombay, 1,785 22
Boston, 8 cks 500
Calcutta, { 5 12 / 250 bdls.
C. C. Castle, 100
Cape Town, 2,546
Colomaba, 150
Constantinople, 300
Curacao, 300
Delagoa Bay, 877 13
Freemantle, 100
Gibraltar, 50
Gd. Canary, 271
Hong Kong, 814
Kingston, 150
Lagos. 123
La Plata, 8
Malta, 30
Manaos. 450
Mazatlan, 1
Montreal, 54 600
New York, 8 500
200 pks.
Old Calabar, 950
Philadelphia, 500
Pt Elizabeth, 221
Pt. Natal, 500 5
Progresso, 1
Punta Gorda, 200
Quebec, 3
Rotterdam, 1 475
Shanghai, 40
St. John's, N'fld., 6 brls. 75
St. Thomas, 1
Savanilla, 1
Tampico, 1
Syra 100
Talcahuano, 1
Trieste 1
Trinidad, 525
Valparaiso, 4

Soda—
Montreal, 2 cks.

Soda Alkali—
Barcelona, 150 brls.
Galatz, 40
Genoa, 31
Odessa, 50
Lisbon, 85

Soda Ash—
Adelaide, 8 cks.
Antwerp, 20 bgs.
Boston, 1,640 33 tcs.
B. Ayres, 84 brls.
Calcutta, 100 kgs.
Callao, 107 cks.
Canea. 100 bgs.
Catania, 20 pks.
Copenhagen, 2,100
E. London, 23
Ghent, 4
Hamburg, 2,250 5 dms.
Konigsberg. qty.
Montreal, 130 70 brls. 25 tcs.
Newfairwater, 100
New York, 2,165 81
Para, 8
Philadelphia, 200 206 cks. 82
Portland, Or., 7
Porto Alegre, 140
Rio de Janeiro, 250
Rotterdam, 24
Santander. 2

Soda Crystals—
B. Ayres, 100 kgs.
Cadiz, 33
Halifax, 100
Montreal, 100 150 cks.
N. Orleans. 140
Philadelphia, 794 brls.
Quebec, 75 pks.
Rotterdam, 1 cs.
St. John's, N'fd., 80

Sodium Bicarbonate—
Adelaide, 140 kgs. 5 cks. 100 bgs.
Alexandria, 20 brls.
Almeria, 10 3 4
Boston, 15
B. Ayres, 50 9 150 bgs.
Cadiz, 30
Cape Town, 8
Copenhagen, 48 8
Dantzic, 20
E. London, 50
Gefle, 4
Genoa, 500
Gothenburg, 40
Gutujewski, 200
Halifax, 125
Marseilles, 7 pks.
Melbourne, 270 12
Montreal 340 50 bgs.
Newcastle, N.S 160
Newport News, 275
Odessa, 864
Pt. Natal, 40
Rangoon, 6
St. John's, N'fld , 20
Sydney, 100 40 brls.
Stettin, 52 9
Stockholm, 35 6
Taltal, 40 4 100 bgs.
Vera Cruz, 50
Yokohama, 80

Sodium Bichromate—
Ghent, 14 cks.

Sodium Carbonate—
Boston, 56 brls.

Sodium Chlorate—
Boston, 75 kgs.
Dantzic, 10
New York, 60
Paris, 20

Sodium Hyposulphite—
Callao, 20 kgs.

Sodium Silicate—
Calcutta, 31 cks.
Cape Town, 13
Kingston, 7
Newcastle, 14 dms
Sydney, 34
Valencia 500 bgs.

Sodium Tartrate—
Oporto, 2 brls.

Starch—
Lisbon, 3 cks.

Sulphur—
Boston, 150 t. 6 c. £489
San Francisco, 50 2 205

Sulphuric Acid—
Suakim, 4 c. £6
Porto Alegre, 12 3 q 3
Rio Grande, 19 1 10

Superphosphates—
Venice, 2,056 t. 6 c. £3,692
Bilbao, 197 1 330

Tartaric Acid—
Pisco 1 c. 3 q. £12
Sydney, 1 t. 128

Tin Salts—
Lisbon, 1 c. 3 q. £6

Varnish—
Pernambuco, 1 cs. 3 dms.
San Sebastian, 3 brls.

Zinc Chloride—
Oporto, 2 t. 1 c. 3 q. £31
Piræus, 4 13 13
Bombay, 12 192

MANCHESTER.

Week ending September 9th.

Alkali—
Rio de Janeiro, 13 brls.

Alum—
Mersyne, 50 brls.
Rio de Janeiro, 6 cks.
Tripoli, S., 23

Ammonium Carbonate—
Barcelona, 10 cs.

Ammonium Chloride—
Alexandretta, 10 brls.
Tripoli, S., 1

Aniline Colours—
Barcelona, 10 cks. 4 cs.
Valencia, 5
Rotterdam, 3 brls.

Aniline Oil—
Barcelona, 10 cks.
Rotterdam, 2 tins
Antwerp, 10

Aniline Salt—
Barcelona, 10 cks.
Rotterdam, 5

Benzol—
Rotterdam, 24 cks. 24 dms.

Bleaching Powder—
Rio de Janeiro, 2 cs.

Caustic Soda—
Treport, 30 dms.
Beyrout 50

Chemicals *(otherwise undescribed)*
Barcelona, 1 ck.
Antwerp, 3 4 kgs.
Mersyne, 2

Copper Sulphate—
Rio de Janeiro, 6 cks.

Copperas—
Alexandretta, 20 brls.
Mersyne, 20
Tripoli, S., 25

Cottonseed Oil—
Tunis, 45 brls.

Dextrine—
Barcelona, 90 bgs. 4 kgs.

Dyestuffs *(otherwise undescribed)*
St. Petersburg, 122 bgs. 50 pcs.

Glue—
Barcelona, 19 cks.
Rotterdam, 10

Linseed Oil—
Mehdia, 3 brls.
Susa, 2
Tunis, 4

Logwood—
Barcelona, 9 brls. 8 cs

Magnesium Sulphate—
Bombay, 300 bgs.
Rotterdam, 1

Oxygen—
Treport, 93 tubes

Painters' Colours—
Alexandria, 95 cks.
Rio de Janeiro, 1

Potassium Prussiate—
Paris, 8 cs

Salt—
Antwerp, 90 t. 3,000 kgs.
Rotterdam, 200

Soap—
Hamburg, 1 pkt.
Gibraltar, 100 bxs.
Treport, 136 cs.

Soda Ash—
Alexandria, 50 brls.

Soda Crystals—
Alexandria, 100 brls.

Sodium Carbonate—
Tunis, 22 kgs.

Tar Oil—
Antwerp, 10 cks. 12 dms.
Treport, 54 23 brls.

Tar Salts—
Antwerp, 44 cks.

Toluol—
Rotterdam, 50 cks. 25 dms.

Varnish—
Rio de Janeiro, 8 cs.

HULL.

Week ending September 5th.

Alkali—
Christiania, 1 cs.

Ammonium Sulphate—
Bordeaux, 128 kgs.

Barytes—
Stettin, 200 t.

Bleaching Powder—
Stettin, 39 cks.
Caustic Soda—
Helsingfors, 2 cks.
Wyburg, 33 pks.
Chemicals (*otherwise undescribed*)
Antwerp, 8 cks.
Amsterdam, 1 pk.
Bombay, 37 200
1,416 cs.
Christiania, 10 4 20
1,655 slbs.
Copenhagen, 4 40
Danzig, 119
Gothenburg, 1 8 10
Helsingfors, 8
Hamburg, 4 207 7
Kurrachee, 320 40
Konigsberg, 1 2
New York, 25
Rotterdam, 58 50
Stettin, 3 1 2
Cottonseed Oil—
Antwerp, 1,059 c.
Amsterdam, 745
Bremen, 293
Christiania, 18
Christiansand, 17
Copenhagen, 200
Danzig, 134
Hamburg, 1,412
Rotterdam, 1,148
Creosote—
Helsingfors, 30 brls.
Dyestuffs (*otherwise undes.*)—
Christiania, 45 bgs.
Danzig, 1 cs
Riga 1
Stettin, 3 kgs. 1
Linseed Oil—
Amsterdam, 809 c.
Aalesund 53
Bergen, 55
Bombay, 716
Christiania, 879
Christiansand, 49
Christiansund, 21
Drontheim, 53
Gothenburg, 29
Hamburg, 337
Kurrachee, 73
Rotterdam, 34
Stavanger, 52
Manure—
Bordeaux, 612 bgs.
Dunkirk, 130 t.
Hamburg, 500 sks.
Venice, 1,999
Mineral White—
Rotterdam, 5 cks.
Painters' Colours—
Antwerp, 40 cks 3 cs. 6 pks.
Amsterdam, 26 1 4
Bergen, 1 8
Bombay, 4 25
Christiania, 62
Christiansand, 80
28 dms.
Copenhagen, 4 1
Dunkirk, 5
Gothenburg, 1 4 2
Ghent, 10
Helsingfors, 5
Hamburg, 1 11
Kurrachee, 2 2
New York, 10
Rotterdam, 2
Stettin, 27
Wyburg, 100
Phosphate—
Venice, 2,246 t.
Pitch—
Antwerp, 80 t.
Pyridine—
Amsterdam, 12 cks
Soap—
Antwerp, 3 cs.
New York, 70
Stettin, 1
Sodium—
New York, 30 cs.
Starch—
Copenhagen, 130 cs.
Tallow—
Amsterdam, 9 cks.
Rotterdam, 19
Tar—
Ghent, 2 cks.
Helsingfors, 5
Hamburg, 7
Copenhagen, 10
Dunkirk, 65
Varnish—
Antwerp, 7 cks. 1 cs 8 dms.
Bombay, 75
Copenhagen, 2 4
Ghent, 2
Hamburg, 3
Rotterdam, 1
Stettin, 8 1 pk.

GLASGOW.

Week ending September 10th.

Albumen—
U.S.A., £168
Canada, 134
Alum—
Antwerp, £24
Ammonium Carbonate—
Drontheim, 5 c.
Ammonium Sulphate—
Trinidad 11 t. 14 c.
Venice, 10 2½
Bleaching Powder—
Melbourne, £50
Boracic Acid—
Yokohama, £76
Coal Products—
Aniline Colours
U.S.A., £135
Aniline Salts
Boston, £220
Creosote
France, £1,130
Creosote Oil
U.S.A., £50
Christiania, 7
Naphtha
Caen, 19 t. 2 c.
Pitch
Caen, 290 t.
Canada, £85
Gothenburg, 140
Hamburg, 17 7 c.
Tar
Norrkoping, 1,016 brls.
Tar Acids
U.S.A., £30
Tar Oil
Hamburg, 1 t. 7 c.
Coal Products (*otherwise undes.*)—
Rotterdam, £566
Cod Oil—
Brisbane, £22
Copperas—
Bombay, £44. 19s.
Dyestuffs (*otherwise undes.*)—
Gothenburg, £194
Extracts—
U.S.A., £124
Christiania, £9. 15s.
Magog, 66
St. Hyacinthe, 8 17
Bergen, 4 t. 10 c.
Iodine—
Rotterdam, £430
Lead Sulphate—
Stockholm, £29
Linseed Oil—
B. Ayres, 8 t.
Malta, 3 3 c.
Adelaide, £158
Melbourne, 1
Litharge—
Bombay, £29
Alicante, 32
Canada 238
Logwood—
Paris, Ont., £42. 17s.
Victoria, £125
Magnesium Sulphate
Adelaide, £46
Manure—
Hamburg, 8 t. 10 c
Venice, 6 7
Nitric Acid—
Bombay, £42
Paint—
Budapest, £35
Demerara, 24
Queensland, 25
Bangkok, 160
Yokohama, 78
Painters' Colours—
Cape Town, £21
Calcutta, 238
Hiogo, 37
Saigon, 42
Amsterdam, 16
Paraffin Wax—
Barcelona, £66
Fiume. 309
Valencia, 122
Venice, £29. 10s.
Christiania, 41
Stockholm, 102 10
Potassium Bichromate—
Bombay, £164
Venice, 216
Antwerp, 198
Barcelona, 995
Amsterdam, 200
Rotterdam, 597
Melbourne, 60
Stockholm, 64
Sheep Dip—
B. Ayres, £138
Soap—
E. London, 2 t. 10 c.
Trinidad, 2 16¾
Jamaica, 4 3
Sodium Bichromate—
Bombay, 1 t.
Barcelona, 18 2 c.
Ghent, 4 19¾
Tallow—
Antwerp, £1,318
San Sebastian, 353
Treacle—
Christiania, 13 t. 5 c.
Gothenburg, 18 17½
Halmstad, 6 15¾
Bergen, 8
Norrkoping, 33 11
Stockholm, 31 15
White Lead—
Natal, 4 t. 16½ c.

TYNE.

Week ending September 5th.

Alkali—
Amsterdam, 16 t. 15 c.
Copenhagen, 15 8
Ammonia—
Barcelona, 1 t. 5 c.
Ammonium Carbonate—
Genoa 10 c.
Ammonium Sulphate—
Odense, 5 t.
Genoa, 40
Antimony—
Rotterdam, 4 t.
Montreal. 1
Hamburg, 7 10 c.
Arsenic—
Barcelona, 9 c.
Barium Carbonate—
Hamburg, 150 t.
Blanc Fixe—
Montreal, 1 t. 10 c.
Bleaching Powder—
Amsterdam, 15 t. 8 c.
Hamburg, 10
Antwerp, 10 3
Helsingfors, 65 9
Rotterdam, 24 12
Copenhagen, 7 3
Carbolic Acid—
Antwerp, 6 gls.
Caustic Soda—
Amsterdam, 4 t. 4 c.
Hamburg, 8 11
Antwerp, 9 18
Helsingfors, 2 10
Bjorneborg, 1
Rotterdam, 18
Copenhagen, 5 16
Genoa, 15 8
Montreal, 43 10
Chemicals (*otherwise undescribed*)
Cartagena, 8 c.
Colours—
Tromsoe, 11 c.
Naples, 8
Guano—
Genoa, 10 t.
Lime—
Antwerp, 1 c.
Litharge—
Hamburg, 1 t. 16 c.
Copenhagen, 17
Amsterdam, 10
Genoa, 17
Harlingen, 5
Magnesia—
Hamburg, 18 t.
Barcelona, 3 4 c
Paint—
Tromsoe, 4 t.
Antwerp, 16 c. 55 dms.
Potassium Carbonate—
Copenhagen, 2 t.
Soap—
Antwerp, 5 c.
Bergen, 7
Soda—
Smyrna, 8 t. 2 c.
Constantinople, 32 10
Antwerp, 5 4
Aarhuus, 5 7
Helsingfors, 13 8
Bjorneborg, 2 13
Rotterdam, 23 1
Leghorn, 10
Amsterdam, 40 4
Genoa, 30 2
Soda Ash—
Hamburg, 5 t. 11 c.
Antwerp, 1 19
Sodium Hyposulphate—
Copenhagen, 17 c.
Sodium Hyposulphite—
Montreal, 5 t.
Sodium Silicate—
Smyrna 11 t. 11 c.
Constantinople, 6 3
Sodium Sulphate—
Copenhagen, 3 t. 3 c.
Sulphur—
Ghent, 6 t. 1 c.
Superphosphates—
Genoa, 100 t. 1 c.
Tallow—
Antwerp, 1 c.
Genoa, 1 t.
Turpentine—
Antwerp, 7 gls.
Varnish—
Antwerp, 7 gls.
White Lead—
Helsingfors, 9 c.
Copenhagen, 11 t. 10

GOOLE.

Week ending September 2nd.

Chemicals (*otherwise undescribed*)
Amsterdam, 1 ck. 1 cs.
Harlingen, 10
Coal Products (*otherwise undes.*)—
Antwerp, 4 cks.
Boulogne, 1266 4 cs.
Hamburg, 25
Rotterdam, 331 3
Colours—
Amsterdam, 1 ck. 1 tin
Boulogne, 1 1 cs
Harlingen, 3
Creosote—
Kuysna, 2,750 cks.
Dyestuffs (*otherwise undescribed*)
Antwerp, 1 ck.
Hamburg, 1
Manure—
Antwerp 400 bgs.
Rouen. 200
Pitch—
Antwerp, 313 t.

GRIMSBY.

Week ending September 5th.

Alkali—
Hamburg. 30 cs.
Port au Prince, 60 dms.
Chemicals (*otherwise undescribed*)
Hamburg, 4 bls.
Malmo, 12 cks.
Rotterdam, 30 dms.
Coal Products (*otherwise undes.*)—
Dieppe, 136 cks.
Colours—
Antwerp, 2 cs. 4 pks.
Dieppe. 2 cks.
Hamburg, 5 2
Port au Prince, 13
Rotterdam, 5 1
Dyestuffs (*otherwise undescribed*)
Dieppe, 1 cs.
Manure—
Esbjerg. 713 bgs.
Pitch—
Malmo, 2 cks.

PRICES CURRENT.

WEDNESDAY, SEPTEMBER 16TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:—			
Acetic, 25 %, and 40 % .. ..per cwt.	5/9 & 8/6		
,, Glacial .. .. ,,	10/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	5	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	12	6
,, ,, (grey) Hull .. .. ,,	7	11	3
Aniline Oil (pure) .. .. per lb.	0	0	10¾
Aniline Salt ,, ... ,,	0	0	9¾
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	12	0	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	10½
Benzol, 90 % .. .. per gallon	0	4	9
,, 50/90 ,, ... ,,	0	3	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	6½
,, (crude 60°) .. .. per gallon	0	1	10
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	11	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	47	17	6
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	7	6
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	2	6
,, ,, (grey) (ex ship .. .. ,,	7	15	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	3
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	8
Oils:—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	6½
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. ..nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	0
,, Chlorate .. .. per lb.	0	0	4½
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	12	6
,, Prussiate Yellow .. .. per lb.	0	0	6¾
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	6½
Sodium (metal) .. .. per lb.	0	2	1
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	12	6
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5½
,, Borate (Borax) .. .. net, per ton.	18	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	5	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	5	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	10	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	10½
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	15	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	0	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	3	5	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton.	6	5	0
(Roll Brimstone) .. .. ,,	6	5	0
,, Brimstone: Best Quality .. .. .. ,,	4	15	0
Superphosphate of Lime (26% .. .. ,,	2	17	6
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	62	0	0
Zinc (Spelter) .. .. ,,	16	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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isements intended for insertion in the current week's issue each the office by **Thursday morning** at the latest.

MIXED PICKLES.

AS was briefly stated last week, Messrs. Lysaght, Ltd., propose removing their works from Wolverhampton. For several years the discharge of galvanisers' waste pickle into the sewers of the Wolverhampton Corporation has been causing much trouble to both the Corporation and the galvanisers. Prosecutions have been as plentiful as hollyberries in a hard winter, and as prickly in handling as the holly itself.

Without a doubt, the problem was a troublesome one, but the Corporation seemed to have made up their mind that they would have as little as possible to do with any scheme for solving it. Their one and only object was to get "shot" of the "bosh" water and waste pickle. But in pursuing their method of keeping pickle out of the sewers they have finally got themselves into a far more serious pickle. For years they have had "bosh" on the brain, and now they are beginning to talk it, in endeavouring to explain away their share of responsibility for the exodus of Messrs. Lysaght from their town.

About four years ago the anti-pickle crusade had reached its zenith, and we had something to say concerning the tactics of the Corporation. At the time we purposely refrained from falling back on the somewhat threadbare argument that the policy of the Corporation would drive manufacturers out of the town. Though such a thing is always possible, it is, as far as our experience goes, not always probable. We therefore adopted the alternative course of urging the manufacturers to do all they could to better their processes of treatment and disposal, so as to place themselves beyond reproach, and remove the stigma under which they laboured, regardless of the justice or injustice of the circumstances. After due consideration, it appears that one of the largest firms has concluded that the only way to definitely remove the bane of their existence is to remove themselves. They certainly have sought the goal we advocated, but they have chosen their own and a different route, thus showing that now and then the argument we abstained from using has a potency that must not be ignored, and the talk of driving away trade is not all chemical clap-trap.

However, looking back upon the attitude taken by the chairman of the Council in 1893, we should think the Council were delighted by the turn things have taken, since it was then stated that if the galvanising trade were removed to Australia it would mean a saving of £2,000. a year to the ratepayers—and presumably the Council wished it there. Yet now, when one single firm—albeit a large one—intends to quit the place, and take their pickle with them, the Council are whining about the loss to the town, and, like cringelings endowed with the 'umbleness of an Uriah Heep, are endeavouring to lubricate with invisible soft soap the bearings they have heated to the screeching point under the friction of the

last few years. It is preposterous to say that Messrs Lysaght were only wanted to do the same as others; for what was their prospect in the matter? Four years ago schemes for dealing with the pickle nuisance were laid before the Sewerage Committee, and as we took special trouble to acquaint ourselves with the details of these schemes, we are convinced that if no one of them was wholly practicable, they collectively contained the nucleus of an arrangement which might well have been devised if the true welfare of the town had been considered. But for once it seemed that what would benefit the town might also help manufacturers out of their difficulties and prosecutions, and this alone was apparently quite sufficient to ensure the rejection of the proposals.

This, for a start, was enough to damp the ardour of any firms that might have contemplated treating their own pickle and bosh water, but there are other points to be noted.

The kindly stimulus the Corporation gave to enterprising manufacturers, in the shape of a ceaseless fire of prosecutions, not only failed to have the desired effect on galvanisers, but ended finally in the works of those who made a business of treating the pickle being closed, thus once more hampering many of the smaller galvanisers.

Can it be wondered that, with such a retrospect staring them in the face, Messrs. Lysaght declined to take any steps that would enable them to "do as other firms had done"—or been done to.

From start to finish there has been wanting an appreciation of other people's difficulties, as well as their own, on the part of the Corporation. Instead of meeting their temporary opponents in a business-like spirit, they have played the dog in the manger, and are now yelping and snarling because the cow is going to eat her hay in another stall. Honestly, we cannot say that we are in the least degree sorry, as the only hope for the future prosperity of a town which adopts a policy like that pursued by the Wolverhampton Town Council during the last five years, lies in the after-effects of the drastic teachings of a necessarily poignant and personal object lesson such as the present.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Artificial Fuel. J. Steiger. 19,741. September 7.

Producing Formic Aldehyde Vapours. J. J. A. Trillat. 19,744. Sept 7.

Manufacture of White Lead. A. C. J. Charlier. 19,788. September 8.

Smoke Consuming Hydrocarbon Furnaces. L. E. Fraipont. 19,860. September 8.

Vaporizing Tars, Oils, etc. L. E. Fraipont. 19,861. September 8.

Improvements in the Manufacture of Soap and Soap Frames. H. Hadfield. 19,903. September 9.

Artificial Stone and Preservative Paint. J. Steiger. 19,936. Sept. 9.

Quick Drying Paints and Varnishes. E. Wood. 20,020 September 10.

Effecting the Absorption of Chlorine Gas for the Manufacture of Chlorates and Bleaching Liquor. W. R. Clarke and the United Alkali Company, Limited. 20,068. September 10.

Explosives. W. P. Thompson. 20,069. September 10.

Utilizing Peat. W. W. Hughes and Sellaby Willson. 20,084. September 10.

Machines for Preparing Vegetable Fibres. R. J. Eke. 20,147. Sept. 11.

Improved Tanning Process. R. W. James. 20,154. September 11.

Manufacture of Fuel. P. R. de F. d'Humy. 20,156. September 11.

Substitute for Potassium Bitartrate in Dyeing. (c. M. L. Irvine-Moore. 20,208. September 12.

Disinfecting Compound. H. Hiscott. 20,246. September 12.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Production of Basic Carbonate of Lead or White Lead. O. Hamilton, Undershore, Northfleet, Kent Eng. Pat. 22,460. November 25, 1895.

This patent is virtually an amendment of several patents on similar lines. Litharge is dissolved in a solution containing lead acetate and ammonium acetate. The patents of MacIvor, Smith and Elmore are fully criticised and their defects expounded. The virtue of the present patent appears to lie in the attention to detail, special instructions being given for the solution of the litharge, which must be added gradually, and the solvent heated to 80°C. After the basic carbonate has been precipitated by carbon dioxide the precipitate is first washed with a weak solution of sodium carbonate, and then washed till quite neutral. It is claimed that the product so obtained has all the body of "stack" white lead.

Improvements in or Relating to Processes and Apparatus for the Purification of Drinking Water. H. J. N. Bergé, Municipal Laboratory, Brussels. Eng. Pat. 19,362. October 15, 1895.

The purification is effected by the liming system, the excess lime being removed by carbonation with carbon dioxide, and subsequent passage throughout separating and decanting channels. Instead of using carbon dioxide, a soluble salt of iron in the shape of the leachings of roasted pyrites can be used whereby the construction of the mechanical apparatus for mixing and clarifying is greatly simplified. The principal feature is the construction of the apparatus, the details of which are set forth in six drawings accompanying the specification.

Improved Bodies for Use in Apparatus for facilitating contract between Liquids and Gases for the Purpose of Obtaining Reactions. O. Gerlmann, 12, Mark-lane, E.C. Eng. Pat. 14,774. July 3, 1896.

This new filling for scrubbing, condensing, and similar towers, aims at presenting a larger surface than is afforded by coke, &c., and at the same time providing the water seal which is characteristic of plate towers. It consists of globular or cubical hollow bodies, made of any suitable material, the walls of which are so perforated that they are deeply indented, forming short conical tubes, leading into the interior. In the cup-like recesses formed inside by the intrusion of the said tubes, the scrubbing liquor collects. There are two drawings, one of which shows the opposing courses of the rising gases and the descending liquor.

Improvements in Chemical Manure Mixers and the like. E. Paternotte, Hamme-Mille, Belgium. Eng. Pat. 15,473. July 13, 1896.

A sheet-iron cylinder, closed at the ends and corrugated internally, revolves on a fixed central axis, and is fitted with charging and discharging doors. An axle, carrying beaters, is fixed laterally, but eccentrically, in the cylinder (being driven by a belt off a toothed-wheel fixed on the hub of the cylinder), and carried by two arms, sliding in slots on the fixed central shaft, by which means the revolving beater-shaft can be adjusted, so as to approach the periphery of the cylinder or recede to the centre. There are three figures.

Improvements in the Manufacture of Carbonic Acid Gas by the Utilization of a Waste Product Produced in Making Calcium and other Carbides. H. S. Elworthy, 9, Hill-road, Bandra, Bombay, and P. D. Henderson 32, Fopstone-road, London, S.W. Eng Pat. 19,445. Oct. 16, 1895.

The carbon monoxide freely evolved in the manufacture of calcium carbide from lime and slack, or other carbides, is passed over a heated oxide such as copper oxide, whereby the monoxide is converted into the dioxide, which can be compressed or otherwise utilised in various ways. Apparently, there is nothing novel in this invention save that monoxide, derived in this particular way, is employed.

SADLER AND COMPANY (LIMITED).—The annual report of the directors of Sadler and Company, Cleveland Chemical Works, Middlesbrough, shows that the profit realised for the past year amounts to £27,359. 7s. 4d. The directors recommended a dividend of 4 per cent, which after making allowance for depreciation and placing £1,500 to the credit of the reserve fund still left between £5,000 and £6, 00. to be carried forward. Reference was made to the progress of their new chlorine process, which the chairman stated was giving general satisfaction. Some discussion took place as to the departure of the Company in the distillation of petroleum oil, and it was stated that the adoption of this manufacture would prove to be of great advantage to the Company, as it would dovetail in so well with their other trade. The report and balance sheet were unanimously adopted.

THE BRITISH ASSOCIATION.

VERBATIM REPORT OF DR. MOND'S ADDRESS.

HE Liverpool meeting of this Association has proved a most successful one. The address of the retiring President (Sir J. Lister) rally dealt at length with many interesting advances in medicine, also a number of co-related but abstruse biological matters. llent as the address was space will not allow us to do more than y indicate the lines on which the address was laid, and the more rtant topics referred to.

ter a short introduction, emphasising the gradual substitution of ce for empiricism in the practice of medicine, the President plunged ght into a most interesting and instructive exposition of the past and ective aid the discovery of the Röntgen rays has rendered to ry. By a natural relationship reference was next made to the fact his year is the jubilee of anæsthesia, the use of sulphuric ether g been introduced by Dr. Morton of Boston, U.S.A., on September 1846, to be shortly followed by the more general use of oform. In turn reference was made to the work of Pasteur and in connection with bacteriology, and Behring's successful anti- treatment for diphtheria. From the tone of the address there is ubt that whatever others may think and say, Sir Joseph Lister is nced of the efficacy of antitoxin and Pasteur treatment. He traced, enthralling way, the discovery of the origin of microbes, and the opment of the antiseptic system in surgery, concluding with a excursion into the almost romantic mysteries of phagocytosis, the and one of the most helpful pathological developments

CHEMICAL SECTION.

Thursday, the 17th inst., Dr. Ludwig Mond, F.R.S, opened this n. In the course of his presidential address he said :—

endeavouring to fix upon a suitable theme for the address I knew would to-day expect from me, I have felt that I ought to give due deration to the interests which tie this magnificent city of Liver- whose hospitality we enjoy this week, to Section B. (Chemical n) of the British Association.

have therefore chosen to give you a brief history of the

MANUFACTURE OF CHLORINE,

the progress of which this city and its neighbourhood have very conspicuously and very honourably connected, not only gards quantity—I believe this neighbourhood produces to-day as much chlorine as the rest of this world together—but more ularly by having originated, worked out, and carried into practice ıl of the most important improvements ever introduced into this facture. I was confirmed in my choice by the fact that this facture has been influenced and perfected in an extraordinary e by the rapid assimilation and application of the results of purely ific investigations and of new scientific theories, and offers a very kable example of the incalculable value to our commercial interests progress of pure science.

e early history of chlorine is particularly interesting, as it played a important *rôle* in the development of chemical theories. There e no doubt that the Arabian alchemist Geber, who lived eleven ed years ago, must have known that "Aqua Regia," which he red by distilling a mixture of salt, nitre, and vitriol, gave off on g very corrosive, evil-smelling, greenish-yellow fumes, and all his ers throughout a thousand years must have been more or less ted by these fumes whenever they used Aqua Regia, the one ıt of the gold they attempted so persistently to produce.

it was not until 1774 that the great Swedish chemist Scheele ded in establishing the character of these fumes. He discovered n heating manganese with muriatic acid he obtained fumes very r to those given off by "Aqua Regia," and found that these constituted a permanent gas of yellowish-green colour, very nt odour, very corrosive, very irritating to the respiratory organs, hich had the power of destroying organic colouring matters.

cording to the views prevalent at the time, Scheele considered he manganese had removed phlogiston from the muriatic acid, and ısequently called the gas dephlogisticated muriatic acid

ien during the next decade Lavoiser successfully attacked, and ı memorable struggle completely upset the phlogiston theory and he foundations of our modern chemistry, Berthollet, the eminent ıer" of physical chemistry—the science of to-day—endeavoured to nine the place of Scheele's gas in the new theory. Lavoisier was inion that all acids, including muriatic acid, contain oxygen. ollet found that a solution of Scheele's gas in water, when exposed sunlight, gives off oxygen and leaves behind muriatic acid. He lered this as proof that this gas consists of muriatic acid and n, and called it oxygenated muriatic acid.

he year 1785 Berthollet conceived the idea of utilising the colour- ying powers of this gas for bleaching purposes. He prepared the heating a mixture of salt, manganese, and vitriol. He used a solution of the gas in water for bleaching, and subsequently discovered that the product obtained by absorbing the gas in a solution of caustic potash possessed great advantages in practice.

This solution was prepared as early as 1789, at the chemical works on the Quai de Javelle, in Paris, and is still made and used there under the name of "Eau de Javelle."

James Watt, whose great mind was not entirely taken up with that greatest of all inventions—his steam-engine—by which he has benefited the human race more than any other ordinary man, but who also did excellent work in chemistry—became acquainted in Paris with Berthollet's process, and brought it to Scotland. Here it was taken up with that energy characteristic of the Scotch, and a great stride forward was made when, in 1798, Charles Tennant, the founder of the great firm, which has only recently lapsed into the United Alkali Company, began to use milk of lime in place of the more costly caustic potash, in making a bleaching liquid; and a still greater advance was made when, in the following year, Tennant proposed to absorb the chlorine by hydrate of lime, and thus to produce a dry substance, since known under the name of bleaching podwer, which allowed the bleaching powers of chlorine to be transported to any distance.

In order to give you a conception of the theoretical ideas prevalent at this time, I will read to you a passage from an interesting treatise on the art of bleaching published in 1799 by Higgins. In his chapter "On bleaching with the oxygenated muriatic acid, and on the methods of preparing it," he explains the theory of the process as follows:—

"Manganese is an oxyd, a metal saturated with oxygen gas Common salt is composed of muriatic acid and an alkaline salt called soda, the same which barilla affords. Manganese has greater affinity to sulphuric acid than to its oxygen, add the soda of the salt greater affinity to sulphuric acid than to the muriatic acid gas; hence it necessarily follows that these two gases (or rather their gravitating matter) must be liberated from their former union in immediate contact with each other; and although they have but a weak affinity to one another, they unite in their nascent state, that is to say, before they individually unite to caloric, and separately assume the gaseous state; for oxygen gas and muriatic acid gas already formed will not unite when mixed, in consequence principally of the distance at which their respective atmospheres of caloric keep their gravitating particles asunder. The compound resulting from these two gases still retains the property of assuming the gaseous state, and is the oxygenated muriatic gas."

Interesting as these views may appear, considering the time they were published, you will notice that the *rôle* played by the manganese in the process and the chemical nature of this substance were not at all understood. The law of multiple proportions had not yet been propounded by John Dalton, and the researches of Berzelius on the oxides of manganese were only published thirteen years later, in 1812. The green grass we are considering was still looked upon as muriatic acid, to which oxygen had been added, in contradistinction to Scheele's view, who considered it as muriatic acid, from which something, viz., phlogiston, had been abstracted.

It was Humphry Davy who had, by a series of brilliant investigations carried out in the Laboratory of the Royal Institution between 1808 and 1810, accumulated fact upon fact to prove that the gas hitherto called oxygenated muriatic acid did not contain oxygen He announced in an historic paper, which he read before the Royal Society on July 12, 1810, his conclusion that this gas was an elementary body, which in muriatic acid was combined with hydrogen, and for which he proposed the name "chlorine," derived from the Greek, signifying "green," the colour by which the gas is distinguished.

The numerous communications which Humphry Davy made to the Royal Society on this subject form one of the brightest and most interesting chapters in the history of chemistry. They have recently been reprinted by the Alembic Society, and I cannot too highly recommend their study to the young students of our science.

Those who have followed the history of chemistry I need not remind how hotly and persistently Davy's views were combated by a number of the most eminent chemists of his time, led by Berzelius himself; how long the chlorine controversy divided the chemical world; how triumphantly Davy emerged from it; how completely his views were recognised; and how very instrumental they have been in advancing theoretical chemistry.

The hope, however, which Davy expressed in that same historic paper, "that these new views would perhaps facilitate one of the greatest problems in economical chemistry, the decomposition of the muriates of soda and potash," was not to be realised so soon. Although it had changed its name, chlorine was still for many years manufactured by heating a mixture of salt, manganese, and sulphuric acid in leaden stills, as before.

This process leaves a residue consisting of sulphate of soda and sulphate of manganese, and for some time attempts were made to recover the sulphate of soda from these residues, and to use it for the manufacture of carbonate of soda by the Le Blanc process On the other hand, the Le Blanc process, which had been discovered and put

into practice almost simultaneously with Berthollet's chlorine process, decomposed salt by sulphuric acid, and sent the muriatic acid evolved into the atmosphere, causing a great nuisance to the neighbourhood.

Naturally, therefore, when Mr. William Gossage had succeeded in devising plant for condensing this muriatic acid, the manufacturers of chlorine reverted to the original process of Scheele, and heated manganese with the muriatic acid thus obtained. Since then the manufacture of chlorine has become a bye-product of the manufacture of soda by the Le Blanc process, and remained so till very recently.

For a great many years the muriatic acid was allowed to act upon native ores of manganese in closed vessels of earthenware or stone, to which heat could be applied, either externally or internally. These native manganese ores, containing only a certain amount of peroxide, converted only a certain percentage of the muriatic acid employed into free chlorine, the rest combining with the manganese and iron contained in the ore, and forming a brown and very acid solution, which it was a great difficulty for the manufacturer to get rid of. Consequently, many attempts were made to regenerate peroxide of manganese from these waste liquors, so as to use it over again in the production o chlorine.

These, however, for a long time remained unsuccessful, because the exact conditions for super-oxydising the protoxide of manganese by means of atmospheric air were not yet known.

Meantime, viz., in 1845, Mr. Dunlop introduced into the works created by his grandfather, Mr. Charles Tennant, at St. Rollox, a new and very interesting method for producing chlorine, which was in a certain measure a return to the process used by the alchemists.

Indeed, the first part of this process consisted in decomposing a mixture of salt and nitre with oil of vitriol—a reaction that had been made use of for so many centuries! The chlorine so obtained is, however, not pure, but a mixture of chlorine with oxides of nitrogen and hydrochloric acid, which Mr. Dunlop had to find means to elminate.

For separating the nitrous oxides, Mr. Dunlop adopted the method introduced twenty years before by the great Gay-Lussac in connection with vitriol-making, viz., absorption by sulphuric acid, and the nitro-sulphuric acid thus formed he also utilised in the same way as that obtained from the towers which still bear Gay-Lussac's illustrious name, viz, by using it in the vitriol process in lieu of nitric acid. He then freed his chlorine gas from hydrochloric acid by washing with water, and so obtained it pure. This process possessed two distinct advantages—(1) it yielded a very much larger amount of chlorine from the same amount of salt, and (2) the nitric acid, which was used for oxidising the hydrogen in the hydrochloric acid, was not lost, because the oxides of nitrogen to which it was reduced answered the purpose for which the acid itself had previously been employed. But this process was very limited in its application, as it could only be worked to the extent to which nitric acid was used in vitriol-making.

The process has been at work at St. Rollox for over fifty years, and, so far as I know, is there still in operation; but I am not aware that it has ever been taken up elsewhere.

Within the last few years, however, several serious attempts have been made to give to this process a wider scope by regenerating nitric acid from the nitro-sulphuric acid and employing it over and over again to convert hydrochloric acid into chlorine. Quite a number of patents have been taken out for this purpose, all employing atmospheric air for re-converting the nitrous oxides into nitric acid, and differing mainly in details of apparatus and methods of work, and several of these have been put to practical test on a fairly large scale in this neighbourhood, and also in Glasgow, Middlesbrough, and elsewhere. As I do not want to keep you here the whole afternoon, I have to draw the line somewhere as to what I shall include in this brief history of the manufacture of chlorine, and have had to decide to restrict myself to those methods which have actually attained the rank of manufacturing processes on a large scale. As none of the processes just referred to have attained that position, you will excuse me for not entering into further details respecting them.

Mr. Dunlop's process only produced a very small portion of the chlorine manufactured at that time at St Rollox, the remainder being made, as before, from native manganese and muriatic acid, leaving behind the very offensive waste liquors I have mentioned before, which increased from year to year, and became more and more difficult to get rid of. The problem of recovering from these liquors the manganese in the form of peroxide Mr. Dunlop succeeded in solving in 1855.

He neutralised the free acid and precipitated the iron present by treating these liquors with ground chalk in the cold and settling out, and in later years filter-pressing the precipitate, which left him a solution of chloride of manganese, mixed only with chloride of calcium. This was treated with a fresh quantity of milk of chalk, but this time under pressure in closed vessels provided with agitators and heated by steam, under which conditions all the manganese was precipitated as carbonate of manganese. This precipitate was filtered off and well drained, and was then passed on iron trays mounted on carriages through long chambers, in which it was exposed to hot air at a temperature of 300°C., the process being practically made continuous, one tray at the one end being taken out of these chambers, and a fresh tray being put in at the other end. One passage through these chambers sufficed to convert the carbonate of manganese into peroxide, which was used in place of, and in the same way as, the native manganese.

The whole of the residual liquors made at the large works at St. Rollox have been treated by this process with signal success for a long number of years. For a short time the process was discontinued in favour of the Weldon process (of which I have to speak next); but after two years Dunlop's process was taken up again, and, to the best of my knowledge, it is still in operation to this day. It has, however, just like Mr. Dunlop's first chlorine process, never left the place of its birth (St. Rollox), although it was for a period of over ten years without a rival.

THE WELDON PROCESS.

In 1866 Mr. Walter Weldon patented a modification of a process proposed by Mr. William Gossage in 1837 for recovering the manganese that had been used in the manufacture of chlorine. Mr. Gossage had proposed to treat the residual liquors of this manufacture by lime, and to oxidise the resulting protoxide of manganese by bringing it into frequent and intimate contact with atmospheric air. This process—and several modifications thereof subsequently patented—had been tried in various places without success. Mr. Weldon, however, did succeed in obtaining a very satisfactory result, possibly—even probably—because, not being a chemist, he did not add the equivalent quantity of lime to his liquor to precipitate the manganese, but used an excess. However, Mr. Weldon, if he was not a chemist at that time, was a man of genius and of great perseverance. He soon made himself a chemist, and having once got a satisfactory result, he studied every small detail of the reaction with the utmost tenacity until he had thoroughly established how this satisfactory result could be obtained on the largest scale with the greatest regularity and certainty.

He even went further, and added considerably to our theoretical knowledge of the character of manganese peroxide and similar peroxides by putting forward the view that these compounds possess the character of weak acids. He explained in this way the necessity for the presence of an excess of lime or other base if the oxidation of the precipitated protoxide of manganese by means of atmospheric air was to proceed at a sufficiently rapid rate. He pointed out that the product had to be considered as a manganite of calcium, a view which has since been thoroughly proved by the investigations of Goergen and others; and it is only fair to state that Weldon's process is not only a process for recovering the peroxide of manganese originally used, but that he introduced a new substance, viz, manganite of calcium, to be continuously used over and over again in the manufacture of chlorine.

Mr. Weldon had the good fortune that his ideas were taken up with fervency by Colonel Gamble of St. Helens, and that Colonel Gamble's manager, Mr. F. Bramwell, placed all his experience as a consummate technical chemist and engineer at Mr. Weldon's disposal, and assisted him in carrying his ideas into practice. The result was that a process which many able men had tried in vain to realise for thirty years became in the hands of Mr. Weldon and his coadjutors within a few years one of the great successes achieved in manufacturing chemistry.

The Weldon process commences by treating the residual liquor with ground chalk or limestone, thus neutralising the free acid and precipitating any sulphuric acid and oxide of iron present. The clarified liquor is run into a tall cylindrical vessel, and milk of lime is added in sufficient quantity to precipitate all the manganese in the form of protoxide. An additional quantity of milk of lime, from one-fifth to one-third of the quantity previously used, is then introduced, and air passed through the vessel by means of an air-compressor. After a few hours all the manganese is converted into peroxide; the contents of the vessel are then run off; the mud, now everywhere known as 'Weldon Mud,' is settled, and the clear liquor run to waste. The mud is then pumped into large closed stone stills, where it meets with muriatic acid, chlorine is given off, and the residual liquor treated as before.

You note that this process works without any manipulation, merely by the circulation of liquids and thick magmas which are moved by pumping machinery. As compared to older processes it also has the great advantage that it requires very little time for completing the cycle of operations, so that large quantities of chlorine can be produced by a very simple and inexpensive plant. These advantages secured for this process the quite unprecedented success that within a few years it was adopted, with a few isolated exceptions, by every large manufacturer of chlorine in the world; yet it possessed a distinct drawback, viz., that it produced considerably less chlorine from a given quantity of muriatic acid than either native manganese of good quality or Mr. Dunlop's recovered manganese. At that time, however, muriatic acid was produced as a bye-product of the Le Blanc process so largely in excess of what could be utilised that it was generally looked upon as a waste product of no value. Mr. Weldon himself was one of the very few who foresaw that this state of things could not always continue. The ammonia soda process was casting its shadow before it.

Patented in 1838 by Messrs. Dyar and Hemming it was only after the lapse of thirty years (during which a number of manufacturing chemists of the highest standing had in vain endeavoured to carry it into practice) that this process was raised to the rank of a manufacturing process through the indomitable perseverance of Mr. Ernest Solvay of Brussels, and his clear perception of its practical and theoretical intricacies. A few years later in 1872, Mr. Weldon already gave his attention to the problem of obtaining the chlorine of the salt used in this process in the form of muriatic acid. He proposed to recover the ammonia from the ammonium chloride obtained in this manufacture by magnesia instead of lime, thus obtaining magnesium chloride instead of calcium chloride, and to produce muriatic acid from this magnesium chloride by a process patented by Clemm in 1863, viz., by evaporating the solution, heating the residue in the presence of steam and condensing the acid vapours given off.

Strange to say, this same method had been patented by Mr. Ernest Solvay within twenty-four hours before Mr. Weldon lodged his specification. It has been frequently tried with many modifications, but has never been found practicable. Soon afterwards Mr. Weldon, with the object of muriatic acid required by his first process, proposed to replace the lime in this process by magnesia, and so to produce a manganite of magnesia. After treating this with muriatic acid and liberating chlorine he proceeded to evaporate the residual liquors to dryness, during which operation all the chlorine they contain would be disengaged as hydrochloric acid and collected in condensers, while the dry residue, after being heated to dull redness in the presence of air, would be reconverted into manganite of magnesia.

This process was made the subject of long and extensive experiments at the works of Messrs. Gamble at St. Helen's, but did not realise Mr. Weldon's expectations. It however, led to some further interesting developements, to which I shall refer later on.

THE DEACON PROCESS.

Those of you who were present at the last meeting of the British Association in this city will remember that this Section had the advantage of listening to a paper by Mr. Weldon on his chlorine process, and also to another highly interesting paper by Mr. Henry Deacon of Widnes 'on a new chlorine process without manganese.' And those of you who came with the then President of the Section (Professor Roscoe) to Widnes to visit the works of Messrs. Gaskell, Deacon and Co, will well remember that at these works they saw side by side Weldon's process and Deacon's process in operation, and no one present will have forgotten the thoughtful, flashing eyes and impressive face of Mr. Deacon when he explained to his visitors the theoretical views he had formed as regards his process.

Mr. Deacon had made a careful study of thermo-chemistry, which had been greatly developed during the preceding decade by the painstaking, accurate, and comprehensive experiments of Julius Thomsen and of Berthelot, and had led the latter to generalisations, which, although not fully accepted by scientific men, have been of immense service to manufacturing chemistry.

Mr. Deacon came to the conclusion that if a mixture of hydrochloric acid with atmospheric air was heated in the presence of a suitable substance capable of initiating the interaction of these two gases by its affinity to both, it would to a very great extent be converted into chlorine with the simultaneous formation of steam, because the formation of steam from oxygen and hydrogen gives rise to the evolution of a considerably larger quantity of heat than the combination of hydrogen and chlorine. Mr. Deacon found that the salts of copper were a very suitable substance for this purpose, and took out a patent for this process in 1868. He entrusted the study of the theoretical and practical problems connected with this process to Dr. Ferdinand Hurter, who carried them out in a manner which will always remain memorable and will never be surpassed, as an example of the application of scientific methods to manufacturing problems, and which soon placed this beautiful and simple process on a sound basis as a manufacturing operation.

In the ordinary course of manufacture the major part—about two-thirds—of the hydrochloric acid is obtained mixed with air and a certain amount of steam, but otherwise very little contaminated. Instead of condensing the muriatic acid from this mixture of gases by bringing it into contact with water, Mr. Deacon passed it through a long series of cooling pipes to condense the steam, which of course absorbed hydrochloric acid, and formed a certain quantity of strong muriatic acid. The mixture of gases was then passed though an iron superheater to raise it to the required temperature, and thence through a mass of broken bricks impregnated with sulphate or chloride of copper contained in a chamber or cylinder called a decomposer, which was protected from loss of heat by being placed in a brick furnace kept sufficiently hot. In this apparatus from 50 to 60 per cent of the hydrochloric acid in the mixture of gases was burnt to steam and chlorine. In order to separate this chlorine from the steam and the remaining hydrochloric acid the gases were washed with water, and subsequently with sulphuric acid. The mixture now consisted of nitrogen and oxygen, containing about 10 per cent. of chlorine gas, which could be utilised without any difficulty in the manufacture of bleach liquors and chlorate of potash, and which Mr. Deacon also succeeded in using for the manufacture of bleaching powder, by bringing it into contact in specially constructed chambers with large surfaces of hydrate of lime. Within recent years this latter object has been attained in a more expedious and perfect manner by continuous mechanical apparatus (of which those constructed by Mr. Robert Hasenclever and Dr. Carl Langer have been the most successful), in which the hydrate of lime is transported in a continuous stream by single or double conveyors in an opposite direction to the current of dilute chlorine, and the bleaching powder formed delivered direct into casks, thereby avoiding the intensely disagreeable work of packing this offensive substance by hand.

Mr. Decon's beautiful and scientific process thus involves still less movement of materials than the very simple process of Mr. Weldon, because in lieu of large volumes of liquids he only moves a current of gas through his apparatus, which requires a minimum of energy. The only raw material used for converting hydrochloric acid into chlorine is atmospheric air, the cheapest of all at our command. The hydrochloric acid which has not been converted into chlorine by the process is all obtained, dissolved in water, as muriatic acid, and is not lost, as in previous processes, but is still available to be be converted into chlorine by other methods, or to be used for other purposes.

In spite of these distinct advantages, this process took a long time before it became adopted as widely as it undoubtedly deserved. This was mainly due to the fact that the economy in the use of muriatic acid which it effected was at the time when the process was brought out, and for many years afterwards, no object to the majority of chlorine manufacturers, who were still producing more of this commodity than they could use. Moreover, there were other reasons. The plant required for this process, although so simple in principle, is very bulky in proportion to the quantity of chlorine produced, and as I have pointed out, the process only succeeded in converting about one-third of the hydrochloric acid produced into chlorine, the remainder being obtained as muriatic acid, which had in most instances to be converted into chlorine by the Weldon process; so that the Deacon process did not constitute an entirely self-contained method for this manufacture. This defect, of small moment as long as muriatic acid was produced in excessive quantities, was only remedied by an invention of Mr. Robert Hasenclever a short number of years ago; when by the rapid development of the ammonia soda process the previously existing state of things had been completely changed, and when, at least on the Continent, muriatic acid was no longer an abundant and valueless bye-product, but, on the contrary, the alkali produced by the Le Blanc process had become a bye-product of the manufacture of chlorine. Mr. Hasenclever, in order to make the whole of the muriatic acid he produces available for conversion into chlorine by the Deacon process, introduces the liquid muriatic acid in a continuous stream into hot sulphuric acid contained in a series of stone vessels, through which he passes a current of air. He thus obtain a mixture of hydrochloric acid and air, well adapted for the Deacon process, the water of the muriatic acid remaining with the sulphuric acid, from which it is subsequently eliminated by evaporation. In this way the chlorine in the hydrochloric acid can be almost entirely obtained in its free state by the simplest imaginable means, and with the intervention of no other chemical agent than atmospheric air. Since their introduction the Deacon process has supplanted the Weldon process in nearly all the largest chlorine works in France and Germany, and is now also making very rapid progress in this country.

PECHINEY, SOLVAY, AND OTHER PROCESSES.

Mr. Weldon, when he decided to give up his manganite of magnesia process, by no means relaxed his efforts to work out a chlorine process which should utilise the whole of the muriatic acid. While working with manganite of magnesia he found that magnesia alone would answer the purpose without the presence of the peroxide of manganese. He obtained the assistance of M. Pechiney, of Salindres, and in conjunction with him worked out what has become known as the 'Weldon-Pechiney" process, which was first patented in 1884.

This process consists in neutralising muriatic acid by magnesia, concentrating the solution to a point at which it does not yet give off any hydrochloric acid, and then mixing into it a fresh quantity of magnesia so as to obtain a solid oxychloride of magnesium. This is broken up into small pieces, which are heated up rapidly to high temperature without contact with the heating medium, while a current of air is passing through them. The oxychloride of magnesium containing a large quantity of water, this treatment yields a mixture of chlorine and hydrochloric acid with air and steam, the same as the Deacon process, and this is treated in a very similar way to eliminate the steam and the acid from the chlorine. The acid condensed is, of course, treated with a fresh quantity of magnesia, so that the whole of the chlorine which it contains is gradually obtained in the free state.

The rapid heating to a high temperature of the oxychloride of magnesium without contact with the heating medium was an extremely difficult practical problem, which has been solved by M. Pechiney and his able assistant, M. Boulouvard, in a very ingenious and entirely novel way.

They lined a large wrought-iron box with fire-bricks, and built inside of this vertical fire-brick walls with small empty spaces between them, thus forming a number of very narrow chambers, so arranged that they could all be filled from the top of the box, and emptied from the bottom. These chambers they heated to a very high temperature by passing a gas flame through them, thus storing up in the brick walls enough heat to carry out and complete the decomposition of the magnesium oxychloride, with which the chamber was filled when hot enough.

Mr. Weldon himself called this apparatus a 'baker's oven,' in which trade certainly the same principle has been employed from time immemorial; but to my knowledge it had never before been used in any chemical industry. This process has been at work at M. Pechiney's large alkali works at Salindres, and is now at work in this country at the chlorate of potash works of Messrs. Allbright and Wilson at Oldbury, a manufacture for which it offers special advantages. Mr. Weldon and M. Pechiney had expected that this process would become specially useful in connection with the ammonia soda process by preparing in the way proposed by Mr. Solvay and Mr. Weldon in 1872 a solution of magnesium chloride as a bye-product of this manufacture; but, instead of obtaining muriatic acid from this solution by Clemm's process, to treat it by the new process, so as to obtain the bulk of the chlorine at once in the free state. But M. Pechiney did no more succeed than his predecessors in recovering the ammonia by means of magnesia in a satisfactory way.

Quite recently, however, it has been applied to obtain chlorine in connection with the ammonia soda process by Dr. Pick, of Czakowa, in Austria. He recovers the ammonia, as usual, by means of lime, and converts the solution of chloride of calcium, obtained by a process patented by Mr. Weldon in 1869, viz., by treatment with magnesia and carbonic acid under pressure, into chloride of magnesium with the formation of carbonate of lime. The magnesium chloride solution is then concentrated and treated by the Weldon-Pechiney process.

I have repeatedly referred during this brief history to the great change which has been brought about in the position of chlorine manufacture by the development of the ammonia soda process, and have pointed out that the muriatic acid which for a long time was the bye-product of the Le Blanc process, without value, thereby became gradually its main and most valuable product, while the alkali became its bye-product.

I have told you how, very early in the history of this process, Mr. Solvay and Mr. Weldon proposed means to provide for this contingency, and how Mr. Weldon continued to improve these means until the time of his death. Mr. Solvay, on his part, also followed up the subject with that tenacity and sincerity of purpose which distinguishes him; his endeavours being mainly directed to producing chlorine direct from the chloride of calcium running away from his works by mixing it with clay and passing air through the mixture at very high temperatures, thus producing chlorine and a silicate of calcium, which could be utilised in cement-making. The very high temperatures required prevented, however, this process from becoming a practical success.

I have already told you what a complicated series of operations Dr. Pick has lately resorted to in order to obtain the chlorine from this chloride of calcium. Yet the problem of obtaining chlorine as a bye-product of the ammonia soda process presents itself as a very simple one.

This process produces a precipitate of bicarbonate of soda and a solution of chloride of ammonium by treating natural brine or an artificially made solution of salt, in which a certain amount of ammonia has been dissolved, with carbonic acid. In their original patent of 1838 Messrs. Dyar and Hemming proposed to evaporate this solution of ammonium chloride, and to distil the resulting dry product with lime to recover the ammonia. Now all that seemed to be necessary to obtain the chlorine from this ammonium chloride was to substitute another oxide for lime in the distillation process, which would liberate the ammonia and form a chloride which on treatment with atmospheric air would give off its chlorine and reproduce the original oxide. The whole of the reactions for producing carbonate of soda and bleaching powder from salt would thus be reduced to their simplest possible form; the solution of salt, as we obtain it in the form of brine direct from the soil, would be treated with ammonia and carbonic acid to produce bicarbonate and subsequently monocarbonate of soda, the limestone used for producing the carbonic acid would yield the lime required for absorbing the chlorine, and produce bleaching powder instead of being run into the rivers in combination with chlorine in the useless form of chloride of calcium, and both the ammonia used as an intermediary in the production of soda and the metallic oxide used as an intermediary in the production of chlorine would be continuously recovered.

The realisation of this fascinating problem has occupied me great many years. In the laboratory I obtained soon, almost theor results. A very large number of oxides and even of salts of weak were found to decompose ammonium chloride in the desired way: the best results (as was to be clearly anticipated from thermo-che *data*) were given by oxide of nickel.

When, however, I came to carry this process out on a large sca met with the most formidable difficulties, which it took many ye overcome successfully.

The very fact that ammonium chloride vapour forms so re metallic chlorides when brought in contact at an elevated temper with metals or oxides or even silicates, led to the greatest diffi viz., that of constructing apparatus which would not be re destroyed by it.

Amongst the metals we found that platinum and gold were the ones not attacked at all. Antimony was but little attacked, and r resisted very well if not exposed to too high a temperature so t could be, and is being, used for such parts of the plant as ar directly exposed to heat. The other parts of the apparatus comi contact with the ammonium chloride vapour I ultimately succeed constructing of cast and wrought iron, lined with fire-bricks or De tiles, the joints between these being made by means of a cement sisting of sulphate of baryta and waterglass.

After means had been devised for preventing the breaking joints through the unequal expansion of the iron and the earthen the plant so constructed has lasted very well.

Oxide of nickel, which had proved the most suitable materi the process in the laboratory, gave equally good chemical results o large scale, but occasionally a small quantity of nickel chloride volatilised through local over-heating, which, however, was sufficie gradually make up the chlorine conduits. We therefore looked o an active material free from this objection. Theoretical considera indicated magnesia as the next best substance, but it was found tha magnesium chloride formed was not anhydrous, but retained a ce amount of the steam formed by the reaction, which gave rise t formation of a considerable quantity of hydrochloric acid on treat with hot air. In conjunction with Dr. Eschellman (who carried the experiments for me), I succeeded in reducing the quantity o hydrochloric acid to a negligible amount by adding to the magne certain amount of chloride of potassium, which probably has the e of forming an anhydrous double chloride.

This mixture of magnesia and potassium chloride is, after the add of a certain quantity of china clay, made into small pills in ord give a free and regular passage throughout their entire mass to the air and other gases with which they have to be treated. In ord avoid as far as possible the handling and consequent breaking of t pills, I vapourise the ammonium chloride in a special apparatus, take the vapours through these pills and subsequently pass hot through, and then again ammonium chloride vapour, and so on, wit the pills changing their place.

The vapourisation of the ammonium chloride is carried out in cast-iron retorts lined with thin Doulton tiles, and placed alt vertically in a furnace which is kept by producer gas at a very st and regular temperature. These retorts are kept nearly full ammonium chloride, so as to have as much active heating surfac possible. From time to time a charge of ammonium chloride is in duced through a hopper at the top of these retorts, which is closed a nickel plug. The ammonium chloride used is very pure, b crystallised out from its solution as produced in the ammonia manufacture by a process patented by Mr. Gustav Jarmay, which sists in lowering the temperature of these solutions consider below 0°C. by means of refrigerating machinery. The retorts therefore evaporate a very large amount of ammonium chloride be it becomes necessary to take out through a door at their bottom non-volatile impurities which accumulate in them. The ammoni chloride vapour is taken from these retorts by cast-iron pipes lined tiles and placed in a brick channel, in which they are kept hot prevent the solidification of the vapour, to large upright wrought cylinders which are lined with a considerable thickness of fire-bri and are filled with the magnesia pills, which are, from the previ operations, left at a temperature of about 300°C. On its pas through the pills the chlorine in the vapours is completely retained them, the ammonia and water vapour formed pass on and are take a suitable condensing apparatus. The reaction of the ammoni chloride vapour upon magnesia being exo-thermic, the temperatur the pills rises during this operation, and no addition of hea necessary to complete it. The temperature, however, does not sufficiently to satisfactorily complete the second operation, viz., liberation of the chlorine and the re-conversion of the magnes chloride into magnesium oxide by means of air. This reaction slightly endo-thermic, and thus absorbs a small amount of heat, wh has to be provided in one way or another. I effect this by heating pills to a somewhat higher temperature than is required for the act of the air upon them, viz., to 600°C., by passing through them

current of a dry inert gas free from oxygen heated by a Siemens-Cowper stove to the required temperature. I use for this purpose the gas leaving the carbonating plant of the ammonia soda process.

This current of gas also carries out of the apparatus the small amount of ammonia which was left in between the pills. It is washed to absorb this ammonia, and, after washing, this same gas is passed again through the Siemens-Cowper stove, and thus constantly circulated through the apparatus, taking up the heat from the stove and transferring it to the pills. When these have attained the required temperature, the hot inert gas is stopped, and a current of hot air passed through, which has also been heated to 600°C. in a similar stove The air acts rapidly upon the magnesium chloride, and leaves the apparatus charged with 18 to 20 per cent of chlorine and a small amount of hydrochloric acid. The chlorine comes gradually down, and when it has reached about 3 per cent. the temperature of the air is lowered to 350°C. by the admixture of cold air to the hot air from the stove; and the weak chlorine leaving the apparatus is passed through a second stove, in which its temperature is raised again to 600°C, and passed into another cylinder full of pills which are just ready to receive the hot-air current. A series of four cylinders is required to procure the necessary continuity for the process.

The chlorine gas is washed with a strong solution of chloride of calcium, which completely retains all the hydrochloric acid, and is then absorbed in an apparatus invented by Dr. Carl Langer, by hydrate of lime, which is made to pass by a series of interlocked transporting twin-screws in an opposite direction to the current of gas, and produces very good and strong bleaching powder, in spite of the varying strength of the chlorine gas. The hydrochloric acid absorbed by the solution of calcium chloride can by heating this solution be readily driven out and collected.

This process has now been in operation on a considerable scale at our Works at Winnington for several years, with constantly improving results, notably with regard to the loss of ammonia, which has gradually been reduced to a small amount. The process has fully attained my object, viz., to enable the ammonia soda process to compete, not only in the production of carbonate of soda, but also in the production of bleaching powder, with the Le Blanc process.

Nevertheless, I have hesitated to extend this process as rapidly as I should otherwise have done, because very shortly after I had overcome all its difficulties, entirely different methods from those hitherto employed for the manufacture of chlorine were actively pushed forward in different parts of the globe, for which great advantages were claimed, but the real importance and capabilities of which were and are up to this date very difficult to judge. I refer to the processes for producing

CHLORINE BY ELECTROLYSIS.

During the first decade of this century, Humphry Davy had by innumerable experiments established all the leading facts concerning the decomposing action of an electric current upon chemical compounds. Amongst these he was the first to discover that solutions of alkaline chlorides, when submitted to the action of a current, yield chlorine. His successor at the Royal Institution, Michael Faraday, worked out and proved the fundamental law of electrolysis, known to everybody as "Faraday's Law," which has enabled us to calculate exactly the amount of current required to produce by electrolysis any definite quantity of chlorine. Naturally, since these two eminent men had so clearly shown the way, numerous inventors had endeavoured to work out processes based on these principles for the production of chlorine on a manufacturing scale, but only during the last few years have these met with any measure of success.

It has taken all this time for the classical work of Faraday on electro-magnetism to develop into the modern magneto-electric machine, capable of producing electricity in sufficient quantity to make it available for chemical operations on a large scale; for you must keep in mind that an electric installation sufficient to light a large town will only produce a very moderate quantity of chemicals.

In applying electricity to the production of chlorine, various ways have been followed, both as to the raw materials and as to the apparatus employed. While most inventors have proposed to electrolyse a solution of chloride of sodium, and to produce thereby chlorine and caustic soda, I am not aware that up to this day any quantity of caustic soda made by electrolysis has been put on to the market.

Only two electrolytic works producing chlorine on a really large scale are in operation to-day. Both electrolyse chloride of potassium, producing as a bye-product caustic potash, which is of very much higher value than caustic soda, and of which a larger quantity is obtained for the same amount of current expended. These works are situated in the neighbourhood of Stassfurt, the important centre of the chloride of potassium manufacture. The details of the plant they employ are kept secret, but it is known that they use cells with porous diaphragms of special construction, for which great durability is claimed. There are at this moment a considerable number of smaller works in existence, or in course of erection in various countries, intended to carry into practice the production of chlorine by electrolysis by numerous methods, differing mainly in the details of the cells to be used; but some of them also involving what may be called new principles. The most interesting of these are the processes in which mercury is used alternately as cathode and anode, and salt as electrolyte. They aim at obtaining in the first instance chlorine and an amalgam of sodium, and subsequently converting the later into caustic soda by contact with water, which certainly has the advantage of producing a very pure solution of caustic soda Mr. Hamilton Castner has carried out this idea most successfully by a very beautiful decomposing cell, which is divided into various compartments, and so arranged that by slightly rocking the cell the mercury charged with sodium in one compartment passes into another, where it gives up the sodium to water, and then returns to the first compartment, to be recharged with sodium His process has been at work on a small scale for some time at Oldbury near Birmingham, and works for carrying it out on a large scale are now being erected on the banks of the Mersey, and also in Germany and America.

Entirely different from the foregoing, but still belonging to our subject, are methods which propose to electrolyse the chlorides of heavy metals (zinc, lead, copper, &c.) obtained in metallurgical operations or specially prepared for the purpose, among which the processes of Dr. Carl Hoepfner deserve special attention. They eliminate from the electrolyte immediately, both the products of electrolysis, chlorine on one side and zinc and copper on the other, and thus avoid all secondary reactions, which have been the great difficulty in the electrolysis of alkaline chlorides.

All these processes have, however, still to stand the test of time before a final opinion can be arrived at as to the effect they will have upon the manufacture of chlorine, the history of which we have been following, and this must be my excuse for not going into further details I have endeavoured to give you a brief history of the past of the manufacture of chlorine, but I will to-day not attempt to deal with its future! Yet I cannot leave my subject without stating the remarkable fact that every one of these processes which I have described to you is still at work to this day, even those of Scheele and Berthollet, all finding a sphere of usefulness under the widely varying conditions under which the manufacture of chlorine is carried on in different parts of the world.

Let me express a hope that a hundred years hence the same will be said of the processes now emerging and the processes still to spring out of the inventor's mind. Rapid and varied as has been the development of this manufacture, I cannot suppose that its progress is near its end, and that Nature has revealed to us all her secrets as to how to procure chlorine with the least expenditure of trouble and energy. I do not believe that industrial chemistry will in future be diverted from this Section and have to wander to Section A. under the ægis of applied electricity. I do no believe that the easiest way of effecting chemical changes will ultimately be found in transforming heat and chemical affinity into electricity, tearing up chemical compounds by this powerful medium, and then to recombine their constituents in such form as we may require them. I am sure there is plenty of scope for the manufacturing chemist to solve the problems before him by purely chemical means, of some of which we may as little dream to-day as a few years ago it could have been imagined that nickel would be extracted from its ores by means of carbon-monoxide.

At a meeting of this Association which brings before us an entirely new form of energy, the Röntgen rays, which have enabled us to see through doors and walls and to look inside the human body; which brings before us a new form of matter, represented by Argon and Helium, which, as their discoverers, Lord Rayleigh and Professor Ramsay, have now abundantly proved, are certainly elementary bodies. inasmuch as they cannot be split up further, but are not chemical elements, as they possess no chemical affinity and do not enter into combinations—at a meeting at which such astounding and unexpected secrets of nature are revealed to us, who would call in doubt that, notwithstanding the immense progress pure and applied science has made during this century, new and greater and farther-reaching discoveries are still in store for ages to come?

SULPHATE PLANT AT ROTHESAY.—A special meeting of the Town Council was held last week—Bailie M'Intosh presiding—when it was resolved to accept the offer of Messrs Hanna, Donald, & Wilson, Paisley, for the erection of the plant required at the new gasworks for the manufacture of sulphate of ammonia, that firm's offer being the lowest, viz, £620.

END OF THE SALT UNION JOINERS' STRIKE.—On Monday the Salt Union joiners at Winsford, who have been on strike for ten weeks, resumed work for an extra shilling weekly. The builders' joiners were granted an increase three weeks ago, but they were locked out on Monday morning, the employers insisting upon their accepting 7½d. in lieu of 7¼d. per hour.

THE CARE OF THE EYES IN INDUSTRIAL OPERATIONS.

AN unimpaired eyesight, which is of the greatest importance to all, becomes an absolute necessity to the workman, whose existence depends upon his capacity for labour. Many industries have associated with them consequences which are apt to act prejudicially upon the eyes. Of course much may be done by proprietors and managers to minimise this evil, but it is of importance that the operative himself should thoroughly understand the meaning of the preventive measures, and by his own behaviour facilitate their observance.

That this is too often not the case is shown by the fact that in industries where the eyes are particularly threatened by flying particles the workmen repeatedly neglect to avail themselves of the safety spectacles placed at their disposal, simply because, being unaccustomed to their use, they object to the slight feeling of discomfort which wearing them at first entails.

The safety spectacles devised by Herr Strooff (Direktor der Chem. Fabrik in Griesheim a/M) have reduced this discomfort to a minimum, and we gladly take the opportunity of calling attention to them.

The spectacles consist of two shells of thin lead, connected in the centre by a nose-band. In front of each, and held a short distance away from it, is a convex glass, about 2½ m m. thick and 5 to 6 c m. in diameter, extending beyond the rim of the opening in the shell. The whole is fastened at the back of the head by tapes. In the sides of the shells are a considerable number of perforations so made as to afford absolute security against the admission of foreign bodies. The construction will be seen at once from the accompanying cut.

The great advantage of this construction consists in the increased space between the glass and the eye, whereby the tendency of the former to become dim is entirely obviated.

Herr Jean Seipp, of Frankfort a/M, who makes a speciality of workmen's safety appliances, has added considerably to the the value of the Strooff spectacles by the employment of specially prepared, highly polished, absolutely pure periscopic glasses, with a sight surface of 48 to 60 m m. in diameter.

In cases where complete vision is not continuously necessary, such as chipping boilers, cleaning castings, stone-breaking, etc., it is, of course, best to fortify the spectacles with an insertion of gauze of such a mesh as will least interfere with the use of the eyes.

The use of spectacles is extending rapidly throughout the industries in which they are of value, and, according to different requirements, they can be variously mounted. For instance, for the chemical industry, where their function is chiefly to act as a protection against spurts of acids, the glasses are periscopic, and 2½ m m. thick; for iron workers, miners, and foundry workers, the glasses are conchoidal or flat, and 3 or 4 m m. thick; for workers exposed to fire, the glasses may be tinted or provided with gauze similar to that provided in the Davy lamp. By depressing the glasses upon the shells and closing the side openings a perfect dust protector is produced, and for furnace work, the injurious effect of any particular light may be obviated by coloured glasses.

Herr Seipp also makes mouth and nose protectors, as well as safety lamps and guards for mineral water workers. As the prices are exceedingly modest, it cannot fail to repay those interested who care to examine further into the matter.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols, though nominally unaltered in price, are, if anything, a shade easier, being freely offered for forward. Carbolic acids are quiet, 60% crude may be quoted as standing at 1s. 9d., with 40% crystals at 6½d. Crude naphtha is steady at 1s. 3d., while solvent is unaltered at 1s. 6d. Creosote is steady. Anthracene is now quoted 9¼d. for 30% A and 8¼d. for 30% B. Pitch is causing some a as to its future, and meanwhile is quoted 31s. 6d., f.o.b. East Co

Sulphate, though prices are low, is for various reasons in s better demand. The somewhat wild speculation for forward in quarters is depressing the spot market very badly. It appear considerable sales have been made at Beckton for Jan.-June de at £7. 15s. London outside makes are quoted £7. 12s. 6d., Liv £7. 12s. 6d., Hull £7. 10s., and Leith £7. 8s. 9d. to £7. 10 prompt. Nitrate is quiet.

MISCELLANEOUS CHEMICAL MARKET.

Business continues moderately active for the main products alkali trade, and there is more general disposition on the part o ers to cover forward requirements. In alkali, 58%, there is no c nominally £3. 7s. 6d. per ton, bags, f.o.r. makers works, bu forward business has been reported at lower rates, and prices are for export. Caustic soda slightly easier, and business for 1897 is done on 5s. to 7s. 6d. per ton reduction. To-day's prices, f.o.b., pool, 10 ton lots, are as follows:—77%, £9. 5s.; 74%, £8. 5s.; £7. 7s. 6d.; 60%, £6. 7s. 6d. per ton. Soda crystals without chan bleaching powder there is more business doing, both for prom forward, nearest spot value £6. 10s. to £6. 12s. 6d. f.o.r. Rec sulphur firm at £4. 12s. 6d. per ton, f.o.r., works. Sulphate of unaltered, price, £16. 5s. to £16 10s. f.o.b Chlorate of so still further declined to 5¼d. per lb. Potash, 4½d. Acetates o brown and grey, are meantime without change. Potash, caust carbonate, still in good request, and prices remain firm. Dema white powdered arsenic continues brisk with small supply, £22. 5s. to £22. 10s., f.o.r. Garston, for leading brands. prussiate of potash quiet, price now quoted is 6¼d. per lb.—pr of soda 5d. per lb.

REPORT ON MANURE MATERIAL.

In nitrogenous material there is still no improvement, values being barely maintained. Phosphates are, however, firmly Mineral Phosphates: For shipment up to the end of the yea advance of about ½d. per unit on recent current prices is being but so far this has brought very little response from buyers, an advance will only be paid by those who have let themselves go sh supplies. For shipment next year, when it is anticipated freigh again be easier, shippers are more disposed to do business. For 75 Florida rock, shipment first half of next year, there would pro be sellers at 6½d. per unit, c.i.f. to good United Kingdom ports, 6⅜d., c i f., to the Baltic. For 1897 steamer shipment, 5¾ asked for South Carolina River rock, and the same price woul doubt do for Peace River. For Algerian rock shippers are a about ¼d. more for 58/63%. There is nothing reported in Plate bones, but £3. 12s 6d. per ton would probably be busine October-November shipment. £3. 11s 3d. bid and refused. T are sellers of Bombay bone meal at £3. 12s. 6d. per ton for Oct November shipment. Nitrate of soda is quiet in all positions. spot, 7s. 10½d. per cwt. for ordinary, and 8s. for fine quality, i value. Due cargoes are worth 7s. 7½d. to 7s. 9d. per cwt., and shipment 8s. to 8s. 3d., according to position, but there is practi nothing doing in the forward position.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDA

OILS.—Palm oil is very firm, but there is no business doing account of prices being so firm. There is a small business doi olive, but the demand is limited, prices being very steady. Lin though very quiet, shows no change in price so far, values being 3d. to 18s. 6d. for Liverpool makes in export casks, according quality. Cottonseed is still the same as regards prices and positio both Liverpool refined and American makes. Castor oil is steady the tone healthy. Good seconds Calcutta stand at 3d., and pressure French 2⅝d. per lb. Tallow shows more activity, and is a fair business doing at the old prices. Resin is not only dearer, strong at the advance. Offerings are small, common being quoted 3d. per cwt.; medium, 5s. 9d. to 6s. 3d.; and fine, 6s. 3d. to 7s. per cwt. Spirits of turpentine are firmer, and moving fairly we 19s. 9d. per cwt. Petroleum is firm. Russian refined is quoted 5 per gallon, and American 6¼d. to 7¼d.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY

If there is any movement in the market at all with regard to value of chemicals, it is a lowering one. Generally speaking, mak stocks are large, while the supply of orders is only limited. The exception is still that of sulphur, which continues scarce and very of quotation. Salt cake, chlorate of potash, and sulphate of cop

are all fractionally down in price. The others stand nominally unchanged. Sulphate of ammonia is no better and no worse, the value being about £7. 10s., f.o.b Leith, for prompt. Some holders continue to look for more The low price of £7. 8s 9d., if it was actually done, does not appear to have been repeated. In the mineral oil and solid paraffin section there is no change. Season's supplies of burning oil are being contracted for, but it is believed that substantial discounts have been exacted by the buyers. Lubricants and naphtha are the only really firm lines just now.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 20s.; borax, English, refined, £18., and boracic acid, £28. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4¼d. less 5%, any port; nitrate of soda, 7s 10½d. to 8s. 1½d.; sulphate of ammonia, £7. 10s. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 2s. 6d. less 5%, Liverpool; paraffin scale, hard, 1½d. to 1¾d., and soft, 1¾d. to 2d. per lb.; paraffin wax, 120° semi-refined, 2d. to 2½d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £4. 15s., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 6,801 bags beet refined.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Although prices remain so low, it does not appear to induce any extra demand, and the markets here can only be characterised as excessively dull. The principal imports to date, as against the same time a year ago, have been:—Linseed, 510,384 quarters, against 415,351 quarters; rapeseed, 69,788 quarters, against 104,849 quarters; cottonseed, 111,191 tons, against 127,981 tons; olive oil, 14,540 casks, against 9,845 casks; oilcakes, 10,045 tons, against 10,568 tons; tallow, 48,710 cwts., against 10,376 cwts.; turpentine, 13,271 brls., against 14,519 brls. Linseed oil has declined 5s. per ton, closing flat at 14s. 7½d., naked spot; September-December offer at 14s. 9d.; January-April, at 15s. 1½d.; and May-August, 15s. 6d; boiled and refined, £1. to £2. per ton extra. Export for the week has been 1,620 cwts. Refined cotton oil quiet at 13s. 7½d., naked spot; October offers at 13s. 9d., and November-April at 13s. 10½d.; casks £1. and ordinary barrels £1. 10s. per ton extra. Export of refined oil for the week has been 4,260 cwts Castor oil, 2⅞d. to 3d. per lb. for first pressure. Olive oil remains firm at the advance, with some prospect of further advance. Malaga is quoted, ex ship, £30. per tun. Cod oil, from 15s. 6d. to 16s 6d. per cwt. Italian olive oil soaps, 60%, £16. 10s per ton, c.i.f. Hull. Belgian oleines, £17. 5s. to £19. per ton for distilled and re-distilled, c.i.f. Hull. Brown Yorkshire grease, £8. to £9. per ton. Bone grease, £14. 10s. Boiled siccative oil, £10. 10s. per ton. Green olive oil paste, for soap-making, £20. per ton. c.i.f. Hull.

CAKES.—The sudden collapse of the fine weather stimulates the demand for feeding stuffs. Linseed cakes, £4. 7s. 6d. to £5. 15s. per ton. Cottonseed cakes, £3. 15s. to £4. per ton. Black Sea rape cakes, £2. 12s. 6d. to £3. per ton.

PAINTS.—The demand continues steady in the paint and allied trades. Genuine white lead in oil from about £18. 10s. per ton. Ready-mixed paints, in tins, £24. Dry mineral colours from £3. to £7. 10s. per ton. Paint remover, 25s. to 30s. per cwt. Imperial black varnish, £5. 10s. per ton in barrels. Oak varnish, 5s. 6d. per gallon.

TYNE CHEMICAL REPORT.

TUESDAY

Chemicals are quiet, with little or no new business to report, and no alteration in prices. Soda crystals are £2. 2s. 6d. per ton, gross weight, locally. Caustic 70% £7. 10s. to £7. 15s., 76/77%, £9. to £9 5s. per ton. Sulphur scarce and firm at £4. 15s. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. per ton, nett; do., 50%, £4. 3s. 4d. per ton, nett; do., 52%, £4. 6s. 8d. per ton, nett; alkali, 36%, £3. 5s. per ton, nett; white alkali, 48%, £4. per ton, nett; do., 50%, £4. 15s. per ton, nett; do., 52%, £5. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

COALS are at present rather quiet, though for gas coals the demand is rather better and consumption increasing. Coke still steady and in good demand, 14s. 6d. and 15s. 6d. per ton. To-day's prices are:—Best Northumbrian steam, 8s. 6d. to 9s. per ton; second qualities, 7s. 6d. to 8s. per ton. Small steam, 3s. 6d. to 4s. per ton. Bunker coals, 6s. 6d. to 7s. 3d per ton. Gas coals, 6s. 9d. to 7s. 3d. per ton. Coke, 14s 6d. to 15s. 6d. per ton.

New Companies.

Clegg, Schofield and Company, Ltd.—CAPITAL £1,000., in shares of £1. each. This company has been formed to acquire and carry on the business of chemists, druggists, and drysalters at Heywood, Lancashire.

Woodcock's Ammonia Foam Company, Ltd.—CAPITAL £5,000., in shares of £1. each. This company has been formed to acquire the manufacturing rights for the preparation known as "Woodcock's Fragrant Ammonia Foam."

Standard Cyanide Manufacturing Company, Ltd.—CAPITAL £60,000., in £1. shares. This company has been formed to acquire the patents of J. R Morse for the manufacture of cyanides and ferrocyanides, and to enter into an agreement with T. Morris and Company to manufacture and sell the said products. The subscribers to the memorandum of association are:—A. Barnard, 108, Drayton Park, N., gentleman; P. A. Hutton, 5, Sigdon-road, Dalston, gentleman; C. E. Senior, 7, Tavistock-place, W.C., gentleman; W. O Tewson, 23, Budge-row, E.C., secretary; J. H. Stanrenghi, 90, Finchley-road, N.W., gentleman; A M. Fletcher, 32, Old Jewry, E.C., gentleman; W. J. Synnott, 55, Haverstock Hill, N.W., gentleman.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

E. GORTON, JUNR., and J. HAWORTH, glue, size, and tallow manufacturers, Westhoughton, under the style of Gorton and Haworth.

T. D. GRAHAM (of the firm of James and John Graham), and W. TEASDALE, bone manure manufacturers, Little Salkeld, Cumberland, under the style of Graham and Teasdale.

BANKRUPTCY ACTS, 1883 and 1890.

Adjudication.

FRIEND, W. B., King William-street, London, cement manufacturer's agent.

IMPORTS OF CHEMICAL PRODUCTS

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 12th.

Acetate of Lime—

U. States,	1,367 bgs.	H. Wallace & Co.
,,	1,181	Lister & Biggs

Acetic Acid—

Holland,	15 pks.	Little & Johnston
,,	20 cks.	H. Wallace & Co.
Sweden,	15 crbys	Fuerst Brs.
Holland,	10	Stahlschmidt & Co.
,,	122	A. & M. Zimmermann

Acetone—

Holland,	2 cks.	Hernu, Peron & Co.

Alkali—

France,	180 c.	Prop. Hay's Wf.
Belgium,	120	T. H. Lee

Alum—

Germany,	12 cks.	Ohlenschlager Brs.
Holland,	125	,,

Alumina Sulphate—

Holland,	£87	H. Wallace & Co.

Anhydrous Ammonia—

Holland,	7 cs.	H. Lorenz

Antimony Ore—

A. Turkey,	130 t.	J. Bamber
China,	244	Vivian, Younger & Co.
Portugal,	2	Blagden & Co.
Italy,	18	J. Bamber

Arsenic—

Melbourne,	70 pks.	Grimwade
		Ridley & Co.
France,	20 cks.	T. H. Lee

Asbestos—

Italy,	£150	J. Barber & Co.
Canada,	5	Deering &
		Robottom
,,	48	Furness, Withy, & Co.
Germany,	20	Craven & Co.
France,	10	Girard Frs. & Co.
Italy,	47	Imperial Asbestos Co.
Germany	40	T. H. Lee
Italy,	100	Knill & Grant
,,	195	Brit. Asbestos Co.
Holland,	45	T. H. Lee
Italy,	118	Girard Frs. & Co.

Barytes –

Belgium,	45 cks.	Perkins & Homer
Holland,	115	W. Harrison & Co.
,,	40	J. Kitchin, Ld.
,,	48	W. Taylor & Co.
,,	57	J. L. Lyon & Co.
Belgium,	89	,,
Holland,	44	Taylor Brs. & Co.
,,	19	Union Ltge Co., Ld.

Bleaching Soda—

Germany,	100 cs.	H. Lambert

Bone Meal—

E. Indies,	200 t.	A. Hunter & Co.

Boracic Acid—

Italy,	40 pks.	Beresford & Co.

Borate of Lime—

Arg. Rep.,	£277	J. Puddy & Co.

Bromide of Iron—

Germany,	5 cks.	A. & M.
		Zimmermann

Camphor—

Germany,	1 ck.	T. H. Lee
France,	7 cs.	Union L. Co.,
Adelaide,	3	Soundy & Sons

Caoutchouc—

Zanzibar,	11 c.	L. & I. D. Jt. Co.
P. E. Africa,	35	S. Figgis & Co.
,,	30	Forbes, Forbes & Co.
Rangoon,	95	Alexander & Co.
Germany,	87	Wallace Brs.
,,	7	Anderson,
		Weber & Co.
,,	5	L. & I. D. Jt. Co.
Rangoon,	54	
,,	9	Prop. Hay's Wf.
Singapore,	500	Huttenbach & Co.
Norway,	8	W. E. Bott & Co.
Penang,	908	E. Boustead & Co.

Carbolic Acid—

Holland,	26 cks.	J. Owen

Carbonic Acid—

Holland,	£40	Blagden, Waugh
		& Co
Germany,	120	N. & R. Collyer

Castor Oil—

France,	26 brls.	Baiss Brs. & Co.
,,	20	Anderson,
		Weber & Co.
,,	30 15 cks.	Beresford
		& Co.
Italy,	10 cs	A. Laming
		& Co.
Belgium,	39	R. G. Hall
		& Co.
E. Indies,	3	W. M. Smith
		& Sons
Italy,	18	T. S. Harris
		& Co.
France,	29	J. Greig
,,	20 pks.	F. Boehm
Italy,	2	H. Finkler

Caustic Potash—

Germany,	20 drs.	J. M. Steel & Co.
Belgium,	150 c.	Petri Brs.

Caustic Soda—

Belgium,	36 c.	M. D. Co.

Chemicals *(otherwise undes.)—*

Holland,	£8	T. H. Lee
France,	158	Flageollet & Co
,,	35	Hernu, Peron
		& Co.
Germany,	29	L. & I. D. Jt. Co
Holland,	31	H. Lorenz
Germany,	17	Phillipps & Graves
U. States,	81	A. E. Piggott
Germany,	255	T. H. Lee
Belgium,	109	Société John
		Cockerill
Holland,	17	A. C. Lloyd
Germany,	100	H. Lambert
,,	376	A. & M.
		Zimmermann
U. States,	1,965	E. Swallow

Citrate of Lime—

Germany,	82 cks.	T. H. Lee
Spain,	37	Thames S.
		Tug & L. Co., Ld

Cobalt Ore –

New Caledonia,	166 t.	R. Waters

Copper Sulphate—

Germany,	450	C. Fox

Cream of Tartar—

Portugal,	4 cks.	B. & F. Wf. Co.
Holland,	48	Kirkpatrick & Co
,,	64	B. & F. Wf. Co.
,,	18	F. C. Devon & Co.
Germany,	2	City Coml. Wf. Co.
France,	5	W. C. Bacon & Co.
,,	4	Vokins & Co.

Dextrine—

Germany,	50 bgs.	H. Lorenz
,,	200	Hernu, Peron & Co.

Dyestuffs –

Argois

Italy,	14 pks.	Major & Field
,,	2,538 bgs.	B. Jacob & Sons
,,	123 t.	Thames S. T.
		& L. Co.

Cochineal

Canaries,	50 bgs.	W. H. Cole & Co.
,,	13	W. M. Smith & Sons
,,	1	J. Goddard & Co.

Cutch

Rangoon,	300 bxs.	A. Howden & Co.
,,	250	Leach & Co.

Extracts

France,	120 cks.	L. J. Levinstein
		& Sons
Denmark,	1 cs.	A. F. White
		& Co.
,,	48 pks.	McDougall &
		Bonthron
France,	40	T. H. Lee
Denmark,	1	City Coml. Wf.
,,	1	Bailey & Leetham

Gambier

Singapore,	233 bgs.	J. Greig
,,	357	Beresford & Co.
,,	481 bls.	Union L. Co.
,,	168	Borneo Co.
,,	1,397	Nat. S. S. Co.

Indigo

E. Indies,	20 chts.	P. Macfadyen
		& Co.
,,	3	R. von Glehn &
		Sons
,,	50	Eales, Prince & Co.
,,	29	L. & I. D. Jt. Co.
,,	7	J. Hatton Hall & Co.
France,	5	L. & I. D. Jt. Co.

Myrabolams

E. Indies,	625 bgs.	H. K. Daniels
,,	276	Hoare, Wilson
		& Co.
,,	2,000 pkts.	P. & O. Co.
,,	4,502	A. B. Curtis & Co.
,,	1,200	J. Greig

Shumac

Italy,	350 bgs.	Clark, Gray
		& Co
,,	250	McDougall &
		Bonthron
,,	400	Ross & Deering
,,	500	Harris Brs.
,,	700	J. Kitchin, Ld.
,,	270	Vokins & Co.
,,	10	C. Kuypers

Tanners' Bark

Adelaide,	40 t.	Beresford & Co.
France,	540 cks.	Boutcher,
		Mortimore & Co.
Natal,	17	A. & W. Nesbitt
,,	50	Boutcher, Mortimore
		& Co.
,,	10 c.	Flack, Chandler
		& Co.

Valonia

A. Turkey,	60 t.	A. & W. Nesbitt

Dyestuffs *(otherwise undescribed)*

Germany,	300 bls.	J. Knill & Co

Farina—

Germany,	100 bgs.	Ohlenschlager Brs.
Italy,	25 pks.	C. Tennant, Sons
		& Co.
France,	3 cs	Hernu,
		Peron & Co.
Germany,	100	Bennett S. S. Co.
,,	10 bgs.	W. G. Jacobs

French Chalk –

France,	100 bgs.	Harrison & Co.
Italy,	£40	C. F. Gerhardt

Gamboge—

China,	11 cs.	L. & I. D. Jt. Co.

Glucose—

U. States,	50 pks.	300 c.	L. & I. D.
			Jt. Co.
,,	100	600	T. J. Lipton
,,	50	890	J. Keiller & Son
France,	888	860	Carey & Sons
Germany,	20	40	M. D. Co.
,,	13	105	J. Knill & Co.
U. States,	300	546	R. G. Hall
			& Co.
,,	1,000	1,000	Robinson, Son,
			& Co.
,,	250	250	McDougall
			& Co.
,,	1,250	1,250	Fellows,
			Morton, & Co.
,,	1,250	1,250	Pearce, Pelly,
			& Co.
,,	300	1,800	Soundy & Sons
,,	500	500	Ohlenschlager
			Brs.
,,	3,139	7,052	Bellamy & Co.
,,	1,150	4,290	Deering &
			Robottom

Glue—

U. States,	£76	B. Gallaway
Germany,	6	Craven & Co.
Belgium,	212	J. Barber & Co
Italy,	125	C. A. H. Nichols
Belgium,	95	Taylor Brs.
Holland,	15	H. Johnson & Sons
U. States,	52	Armour & Co
,,	60	F. A. Hodgkinson
		& Co.
Germany,	45	H. Lambert
France,	41	J. Barber & Co.
,,	118	Burnett Brs. & Sons
Holland,	50	Phillipps & Graves
U. States,	40	Beck & Pollitzer
Holland,	8	H. Lambert
,,	8	G. Rahn & Co.
Germany,	12	L. & I. D. Jt. Co.
,,	52	Phillipps & Graves
,,	40	Bailey & Leetham
,,	45	Herrmann, Keller,
		& Co

Kainit –

Germany,	300 t.	F. W. Berk & Co.,
		Ltd.

Lamp Black—

U. States,	102 brls.	M. Ashby Ltd.
,,	50 hds.	J. Melvin

Lead Acetate—

Germany,	£110	R. W. Greeff & Co.

Magnesia—

U. States,	2 bxs.	Vokins & Co.

Manganese—

Auckland,	55 t.	W. A. Sparrow & Co.

Manure—

Germany,	70 t.	F. W. Berk & Co.,
		Ltd.
Melbourne,	2	L. & I. D. Jt. Co.
Germany,	63	Union L. Co., Ld.
,,	27	E. Groschke
,,	20	W. G. Blagden

Methylic Alcohol—

Belgium,	10 dms.	T. V. Tucker
Germany,	2 cks.	H. Lorenz

Mica—

E. Indies,	£755	E. Davis & Co.
Madras,	30	Arbuthnot, Latham,
		& Co.
E. Indies,	1,830	W. M. Smith & Sons

Molasses—

U. States,	5 cks.	12 c.	Girard Brs.
,,	400	2,256	Ohlenschlager
			Brs.
,,	100	600	Falkenberg &
			Hesse

Ochre—

France,	21 brls.	W. V. Robinson
		& Co.
Holland,	6 pks.	2 cs. Phillipps &
		Graves
France,	4 cks.	O'Hara & Hoar
,,	39 pks.	W. Harrison & Co

Paint—

Germany,	1 cs.	T. H. Lee

Phosphate Rock—

Belgium,	155 t.	Lawes Chemical
		Works Co.
,,	213	Hime Brs. & Co.

Pitch—

N. Russia,	300 brls.	Fellows, Morton,
		& Co.
Germany,	60	B. B. Leighton
N. Russia,	244	Linck, Moeller, & Co.

Plumbago—

Germany,	145 cks.	E. & T. Pink
,,	131	B. Gallaway
Ceylon	536	J. Thredder, Son,
	18 brls.	& Co.
Germany,	42 bgs.	T. H. Lee
Ceylon,	85 brls.	Doulton & Co.

Potash—

France,	26 c.	Prop. Hay's Wf.
,,	26	F. H. Henrich
Canada,	50	S. Ward & Co.
Belgium,	£24	Fuerst Brs.

Potassium Carbonate—

France,	200 c.	
Germany,	£375	J. M. Steel
,,	100 c.	

Potassium Chlorate—

Holland,	20 cks.	Thames
		L. &

Potassium Chloride—

Germany,	500 bgs.	F. W. Berk
,,	£470	Bessler,
,,	102 bgs.	Charl

Potassium Oxymuriate—

Norway,	25 kgs.	G. Bo

Potassium Silicate—

Holland,	20 cks.	J. Barb

Potassium Sulphate—

Germany,	236 bgs.	Bessler,

Rosin –

U. States,	529 brls.	Prod. Ref
,,	3,000	F. & S.

Rosin Oil—

France,	250 brls.	C. Pe

Saltpetre—

E. Indies,	637 bgs.	Lucas &
Germany,	70 cks.	S. E. Rai

Soda –

Belgium,	2,780 c.	
,,	112	C. Windsche

Soda Ash—

Belgium,	210 c.	F. Clayt

Sodium Hyposulphite—

Holland,	100 kgs.	R. W. Gree

Starch—

France,	370 cs.	E. &
Belgium,	191 bgs.	M
Holland,	100	Little &
Belgium,	55	Lee
,,	835	E. &
,,	296	F. Clayt
Germany,	1,550	How
,,	100	C. Tenn
Holland,	202	Phillipps &
France,	6	H. Johnso
Belgium,	220	T.

Stearine—

U. States,	6 pks.	L. & I. D.
,,	1 cks.	Wilson &
Belgium,	317 bgs.	H. Hil

Tar—

N. Russia,	1,989 brls.	Linck,

Tartaric Acid—

Holland,	12 pks.	Kirkpatrick
,,	40	B. & F.

Ultramarine—

Holland,	£28	J. Barbe
,,	15	1 ck. Fla
	4 bxs.	
Germany,	20 cs.	Steinha

Varnish—

U. States,	32 pkgs.	Allan Bro
,,	5	Elkan
,,	18	Lanham &
,,	5	Anglo-American

Verdigris—

France,	4 cks.	B. & F.

Vermilion—

Ceylon,	1 cs.	P. & O. S.

White Lead—

Holland,	20 cks.	A. & M. Z
Belgium,	100	Lanch
,,	56	Burrell
,,	31	Union Wh
,,	20 brls.	J. L. Lyon
France,	19	,,
Germany,	21 cks.	M. Ashby
,,	54	D. Stowe &
,,	28	Rischke
,,	58	T. & W. Fa
Holland,	58	,,
,,	9	Little & Jo
,,	20	Perkins &
France,	19	Soundy &

Wood Pulp—
Belgium, 1,441 pks. E. J. & W. Goldsmith
Norway, 600 W. E. Bott
Germany, 50 H. C. Everett
Norway, 5,360 Moreton Cox, Brs. & Co.
Holland, 214 Hernu, Peron, & Co.
Norway, 300 Johnsen & Jorgensen
" 8 W. D. Cork, jnr.
Germany, 15 Thames S. T. & L. Co.
Norway, 74 Union Whvs Co.
Germany, 200 T. H. Lee
Sweden, 498 Union Whvs. Co.

Zinc Oxide—
U. States, 100 brls. M. Ashby, Ltd.
Germany, 500 cks Soundy & Sons
" 5 Prprs. Dowgate Dk.
Sydney, 1,186 bgs. J. Greig
M'bourne, 1,186 L & I. D. Jt. Co.
Holland, 50 brls. M. Ashby, Ltd.
Germany, 60 "

LIVERPOOL.

Week ending September 10th.

Asbestos—
Quebec, 300 bgs.

Barytes—
Antwerp, 50 bgs.
Rotterdam, 4 cks. 100 bgs.

Bone Meal—
Rangoon. 515 bgs.

Boracic Acid—
Leghorn, 81 cks.

Borate of Lime—
Antofagasta, 1,300 bgs.

Borax—
New York, 389 sks. Balfour Williamson
Valparaiso, 1,520 F. Huth & Co.
" 200 A. & S. Henry & Co.

Castor Oil—
Calcutta, 248 cs.
Leghorn, 30

Chemicals (*otherwise undescribed*)
Genoa, 7 cs. W. Grimshaw

Citric Acid—
Messina, 28 cks.

Cod Oil—
Hamburg, 10 brls.

Colours—
Paris, 1 ck. Seine & Mersey S. S. Co., Ld.
Ghent, 6 J. T. Fletcher & Co.

Cottonseed Oil—
New York, 105 brls.

Dyestuffs—
Algarrobilla
Valparaiso, 34 bgs Pulussie & Leste
Argols
Bordeaux, 4 cks.
Cochineal
Gd. Canary, 16 bgs.
Cutch
Rangoon, 1,000 bxs.
Extracts
New York, 5 brls. T. Atkin & Co.
" 5 W. Bingham
" 125 cks.
Gambier
Singapore 3,011 bls 156 bgs.
Logwood
Laguna, 360 t. E. Brownbill & Co.
" 790 c.
Myrabolams
Antwerp, 1 bg.
Shumac
Palermo, 1,125 bgs.

Farina—
Havre, 980 sks.

Glucose—
New York, 590 brls.
Boston, 149

Glue—
Rotterdam, 13 cks. 15 bgs.
St. Nazaire, 29

Hydrate Alumina—
Antwerp, 6 cks. J. T. Fletcher & Co.

Limestone—
Antwerp, 1 crt. 1 cs. J. T. Fletcher & Co.

Manganese Ore—
Calcutta, qty.

Mica—
New York, 6 brls.

Paint—
Boston, 10 cs. Leech & Co.
New York. 1 bx.

Paraffin Scale—
New York, 200 cs. Thompson & Bedford
Philadelphia, 50

Potash—
Hamburg, 100 cks.

Pyrites—
Huelva, 3,261 t. Matheson & Co.

Rosin—
Boston, 1,000 brls.

Saltpetre—
Calcutta, 559 bgs.
Antwerp, 87 cks.

Soap—
Leghorn, 50 cs.
New York. 461 brls.
St. Nazaire, 4 bdls.

Soapstone—
Bordeaux, 400 bgs. G. G. Blackwell, Sons & Co
Philadelphia, 103 W. Harrison & Co.

Starch—
New York, 100 bgs. T. M. Duche & Sons
Hamburg, 160 cs.
Antwerp, 420 J. T. Fletcher
" 454 "
Rotterdam, 180
Boston, 875 sks

Stearine—
Antwerp, 13 bgs. J. T. Fletcher
" 27

Sulphur—
Valparaiso, 10 cs S W Vincent
Catania, 250 t. 17 cks. 320 bgs.
117 brls.

Tallow—
Boston, 64 brls. Unite Oil Co.
" 752 tcs. 104 hds
New York, 234
Boston, 114 Bigland, Sons & Co.

Tar—
Archangel 1,851 brls.

Tartar—
Hamburg, 5 cks. Mandeno & Son
Bordeaux, 45

Tartaric Acid—
Rotterdam, 6 cks.

Treacle—
N. Orleans, 1,600 brls.
Bordeaux, 2 cs.
Philadelphia, 150

Wood Pulp—
Rotterdam, 62 bls.
Boston, 473 307 rolls
Christiania, 1,000 H. Tyrer & Co
Drammen, 5,316 "

Zinc Oxide—
New York, 70 brls.
Antwerp, 50

MANCHESTER.

Week ending September 12th.

Acetate of Lime—
New York, 1,990 bgs.

Acetic Acid—
Rotterdam, 12 blns.

Antimony Sulphite—
Hamburg, 8 cks.

Barium Sulphide—
Rotterdam, 17 cs.

Barytes—
Rotterdam, 4 cks.

Bone Ash—
Pelotas, 217 t. Haycroft & Pethick

Chemicals (*otherwise undescribed*)
New York, 14 cks.

Colours—
Boulogne, 3 cks.
Paris, 3 1 cs
Hamburg, 1 4 pks.
Ghent, 2 brls.
Rotterdam, 207 26 15 bxs.

Dyestuffs—
Alizarine
Rotterdam, 52 cks. 2 cs.
Shumac
Fiume, 1,375 bls. 200 bgs.

Dyestuffs (*otherwise undescribed*)
Rouen, 5 cks.
Antwerp, 2 1 cs.

Farina—
Hamburg, 50 bgs.
Stettin, 1,320 Browne, Geveke, & Co.
" 740

Glucose—
Rotterdam, 4 cks.
New York, 50 brls.

Glue—
Rouen, 40 bls. 7 cs.
Treport, 3
Hamburg, 4 cks.
Fiume, 30 400 bgs.

Limestone—
Antwerp, 4 pks. 1 cs. J. T. Fletcher & Co
" 2

Litharge—
Rotterdam, 6 cks.

Mineral White—
Fiume, 360 bgs.

Ochre—
Treport, 36 cks.

Potash—
Rotterdam, 10 cks.
Treport, 42

Potassium Chloride—
Hamburg, 5 cks.

Soda—
Stettin, 6 cks.

Starch—
Rotterdam, 115 cs.
Fiume, 100 bgs
Hamburg, 266
Antwerp, 10 J. T. Fletcher & Co.
" 352
New York, 1,200 bgs.

Stearine—
New York, 46 hds. Co-op. W'sale Society

Sulphuric Acid—
Rotterdam, 10 cks.

Tallow—
Rouen, 67 bgs.
New York, 358 tcs. Co-op. W'sale Society

Tartaric Acid—
Rotterdam 17 cks

Varnish—
Hamburg, 4 cks.

Waste Salt—
Hamburg, qty.

Wood Pulp—
Gefle, 9,584 bls.
Fiume, 102 pks.
Helsingfors, 550 60 pcls.
Porsgrund, 2,591
Skien, 2,076
Hamburg, 50 1 cs.
Rotterdam, 77
Copenhagen 480 G. F. Green & Co

Zinc Ashes—
Stettin, 14 cks.

Zinc Oxide—
New York, 100 brls.

Zinc White—
Rotterdam, 75 cks.

HULL.

Week ending September 12th.

Acids—
Bari, 32 cks. Wilson, Sons, & Co., Ld.

Albumen—
Riga, 10 cs. Wilson, Sons, & Co., Ld.
St. Petersburg, 48 "

Alkali—
Antwerp, 10 bgs. Wilson, Sons, & Co., Ld.

Barytes—
Rotterdam, 23 cks. W. & C. L. Ringrose
Bremen, 19 G. Holmes & Co.
" 52
Antwerp, 50 bgs. Bailey & Leetham
" 90 cks. H. F. Pudsey
Amsterdam, 19 W. & C. L. Ringrose

Chemicals (*otherwise undescribed*)
Hamburg, 1 ck. Wilson, Sons, & Co., Ld.

Colours—
Rotterdam, 53 cks. Hutchinson & Son
48 pks.
" 24 7 7 brls. W. & C. L. Ringrose
Riga, 50 Wilson, Sons, & Co., Ld.
Antwerp, 5 cs. Bailey & Leetham
" 3 Wilson, Sons, & Co., Ld.
Rotterdam, 1 ck. 1 crt. "
Hamburg, 8 cs. G. Malcolm & Son

Cryolite—
Copenhagen, 2 cks. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 2 cks. Hutchinson & Son
Rotterdam, 2 W. & C. L. Ringrose
3 brls.
Argols
Bordeaux, 49 bgs. Rawson & Robinson
Indigo
Rotterdam, 1 cs. Hutchinson & Son
Myrabolams
Bombay, 6,836 bgs.
Shumac
Trieste, 62 bgs Wilson, Sons, & Co., Ld
Palermo, 633 "
" 1,300

Farina—
Harlingen, 679 bgs. W. & C. L. Ringrose
Stettin, 800 Wilson, Sons, & Co., Ld.
Harlingen, 50 bls. Hutchinson & Son

Glucose—
New York, 300 bgs.
Stettin, 200 40 cks. Wilson, Sons, & Co., Ld.

Glue—
Fiume, 60 bgs.
Antwerp, 6 cks. Bailey & Leetham
Rouen, 43 Rawson & Robinson
Dunkirk, 20 Wilson, Sons, & Co., Ld.

Hydrofluoric Acid—
Hamburg, 7 cs. Bailey & Leetham

Lead Acetate—
Hamburg, 31 cks. Bailey & Leetham

Mineral White—
Fiume, 55 bgs.

Nitrate—
Hamburg, 13 cks. Wilson, Sons, & Co. Ld.

Paint—
Boston, U.S.A., 13 cs. Wilson, Sons, & Co., Ld.
Drontheim, 10 dms. "

Phosphate—
Ghent, 80 t.

Pitch—
Hamburg, 34 bls. Wilson, Sons, & Co., Ld.
Amsterdam, 26 cks. W. & C. L. Ringrose

Potash—
Dunkirk, 21 cks Wilson, Sons, & Co., Ld.
Antwerp, 88 dms. Wilson,
15 pks. Sons, & Co., Ld.

Pumice Stone—
Trieste, 8 pks. Wilson, Sons, & Co., Ld.
Messina, 46 "
" 1 cs.

Quicksilver—
Hamburg, 2 cs.

Rosin—
Brunswick, 1,705 brls.

Salt—
Hamburg, 100 bgs. Bailey & Leetham

Saltpetre—
Hamburg, 78 bgs. Wilson, Sons, & Co., Ld.

Soap—
Bari, 114 cs. Wilson, Sons, & Co., Ld.
Molfetta, 200

Soda—
Antwerp, 57 pks. Wilson, Sons, & Co., Ld.

Sodium—
Stettin, 15 cks. Wilson, Sons, & Co., Ld.

Starch—
Ghent, 378 cs. Wilson, Sons, & Co., Ld.
Amsterdam, 40 Hutchinson & Son
Bremen, 2,730 Veltmann & Co.
Rotterdam, 98 Hutchinson & Son

Stearine—
Trieste, 1 brl. Wilson, Sons, & Co., Ld.
Amsterdam, 7 bgs. W. & C. L. Ringrose

Sulphur—
Catania, 3,712 pks. Wilson, Sons, & Co., Ld.
" 1,163

Tallow—
Boston, U.S.A., 434 pks. Wilson, Sons, & Co., Ld.
St. Petersburg, 50 cks.
Dunkirk, 51 blds. "

Tar—
Stockholm, 150 brls. Wilson, Sons, & Co., Ld.
Hamburg, 1 tin "

Tartar—
Bari, 2 cks.
Messina, 3 Wilson, Sons, & Co., Ld.
Bordeaux, 5 Rawson & Robinson

Tartaric Acid—
Rotterdam, 4 cks. Hutchinson & Son

Treacle—
New York, 281 brls. Wilson, Sons, & Co., Ld.
" 100
Boston, U.S.A., 235 "

Turpentine—
Brunswick, 1,587 brls.

Varnish—
New York, 10 pkr. Wilson, Sons, & Co., Ld.
" 6 brls.

White Lead—
Amsterdam, 13 cks. Hutchinson & Son
Rotterdam, 62 Hutchinson & Son

Wood Pulp—
Abo, 124 bls. J. Good & Sons

Zinc Ashes—
Amsterdam, 15 cks. Hutchinson & Son

Zinc White—
Rotterdam, 85 cks Hutchinson & Son

GLASGOW.

Week ending September 17th.

Acetate of Lime—
Philadelphia, 781 bgs.

Acetic Acid—
Rotterdam, 8 cks. J. Rankine & Son

Ammonium Sulphate—
Rotterdam, 2 btls. J. Rankine & Son

Aniline—
Rotterdam, 34 cks. 11 cs. J. Rankine & Son

Aniline Colours—
Hamburg, 8 pks. 1 cs.

Asbestos—
Quebec, 800 bgs.
Genoa, 50 bls. 15 cs.

Barytes—
Rotterdam, 39 pks. J. Rankine & Son

Bromide—
Hamburg, 4 cs.

Castor Oil—
Antwerp, 99 cks.

Chemicals *(otherwise undes.)*—
Rotterdam, 2 cks. 1 cs. J. Rankine & Son

Colours—
Hamburg, 2 cks.
Antwerp, 8
Rotterdam, 64 pks. J. Rankine & Son

Cottonseed Oil—
New York, 50 brls.

Dyestuffs—
Alizarine
Rotterdam, 46 cks. 1 cs. 8 brls. 69 pks. J. Rankine & Son
Argols
Bordeaux, 10 cks.
Extracts
Antwerp, 6 cks.
Madders
Rotterdam, 5 cks. J. Rankine & Son

Farina—
Delfszyhl, 50 bgs.
Dantzic, 100

French Chalk—
Fiume, 50 bgs.

Glucose—
New York, 2,148 brls.
Philadelphia, 349

Glue—
New York, 90 brls.
Hamburg 60 bgs.
Nantes, 2 cks.

Lead Acetate—
Hamburg, 8 cks.

Paraffin Scale—
New York, 150 brls.
Philadelphia, 150

Pitch—
Archangel, 450 brls.
Hamburg, 1 cs.

Potash—
Rotterdam, 35 bgs. J. Rankine & Son

Rosin—
New York, 379 brls.

Saltpetre—
Hamburg, 50 kgs.

Soap—
New York, 233 bxs.
Philadelphia, 639 pks.
Newport News, 170 brls.
Fiume, 14 cs. Buchanan Brs. & M'Intyre

Sodium Sulphate—
Antwerp, 6 cks.

Starch—
New York, 2,200 bgs.
Fiume, 40
Rotterdam, 52 cs. J. Rankine & Son
Boston, 400

Stearine—
Amsterdam, 61 bgs.

Talc—
Genoa, 50 bgs.

Tar—
Archangel, 1,436 brls

Tar Waste—
Rotterdam, 3 cks. J. Rankine & Son

Tartar—
Bordeaux, 25 cks.

Treacle—
Philadelphia, 500 brls.

Varnish—
New York, 13 brls. 2 bxs.
Antwerp, 3 cks.

Waste Salt—
Hamburg, 550 bgs.

White Lead—
Rotterdam, 51 cks. J. Rankine & Son

Whiting—
Dieppe, 18 cks. Clyde Pottery Co.

Wood Pulp—
Gothenburg, 400 bls.
Fiume, 204
Drontheim, 1,480

Zinc Ashes—
Antwerp, 8 cks.

Zinc Oxide—
Antwerp, 25 cks.

Zinc Sulphate—
Gothenburg, 20 bgs.

Zinc White—
Rotterdam, 50 cks.

TYNE.

Week ending September 12th.

Alum Earth—
Hamburg, 169 cks. Tyne S. S. Co.

Colours—
Hamburg, 4 cks. Tyne S. S. Co.

Cryolite—
Copenhagen, 2 cks.

Pitch—
Archangel, 150 cks.

Soap—
Rotterdam, 4 cs. Tyne S. S. Co.

Starch—
Rotterdam, 66 cs. Tyne S. S. Co.

Stearine—
Antwerp, 7 bgs. Tyne S. S. Co.

Tar—
Archangel, 1,039 brls.

Varnish—
Hamburg, 10 tins Tyne S. S. Co.

White Lead—
Antwerp, 11 brls. Tyne S. S. Co.

Wood Pulp—
Christiania, 180 bls.
Arendal, 60
Gothenburg, 800

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.

GOOLE.

Week ending September 9th.

Alizarine—
Rotterdam, 40 cks.

Alkali—
Calais, 4 cks.

Alumina Sulphate—
Rotterdam, 22 cks.

Aniline—
Rotterdam, 209 cks. 24 cs.
Amsterdam, 4

Antimony—
Boulogne, 7 cks.

Bog Ore—
Antwerp, 300 t.

Caoutchouc—
Boulogne, 5 cks.

Colours—
Ghent, 4 cks.
Hamburg, 2 pks.

Cutch—
Boulogne, 50 cs.

Dyestuffs *(otherwise undescr.)*
Ghent, 16 cks. 1 cs.
Rotterdam, 5 "
Boulogne, 43 20 12 pks.

Glucose—
Hamburg, 28 cks.
Calais, 100 bgs.

Glue—
Boulogne, 10 cks.

Logwood—
Belize, 905 t.

Potash—
Hamburg, 40 cks.
Dunkirk, 9 cks. 24

Rosin—
Brunswick, 2,609 cks.

Saltpetre—
Hamburg, 27 cks.

Soda—
Rotterdam, 8 cks.

Tartar—
Rotterdam, 6 cks.

Waste Salt—
Hamburg, 294 cks. 500 bgs. 2

GRIMSBY.

Week ending September 12

Albumen—
Hamburg, 5 cks.

Barytes—
Hamburg, 28 cks.

Chemicals *(otherwise undescr.)*
Antwerp, 50 clys.
Hamburg, 2 cks.

Colours—
Rotterdam, 130 bgs.
Antwerp, 26 cks. 72 pkg.
Hamburg, 1 "

Dyestuffs *(otherwise unenumer.)*
Dieppe, 32 cks.

Farina—
Hamburg, 90 bgs.

Paint—
Hamburg, 15 dms.

Pitch—
Hamburg, 124 cks.

Starch—
Antwerp, 77 cs.

Wood Pulp—
Gothenburg, 480 bls.
Kragero, 2,553

Zinc Ashes—
Antwerp, 7 cks.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 16th.

Acids—
Algoa Bay, 2 t. 9 c. £28
Durban, 3 12 49

Alkali—
Auckland, 20 t. 3 c. £191
Lyttelton, 2 14

Ammonia (Liquid)—
Pt. Elizabeth, 4 drs. £21

Ammonium Carbonate—
Dunedin, 10 c. £16
Rotterdam, 5 cks. 14
St. Petersburg, 15 t. 420

Ammonium Chloride—
Antwerp, 4 cks. £29
Varna, 5 25
Constantinople, 2 t. 10 c. 83
Hamburg, 1 1 37
Hong Kong, 2 73

Ammonium Sulphate—
Burgbt, 130 t. £1,040
Hamburg, 50 375
Antwerp, 60 450
Treport, 20 7 c. 200

Anhydrous Ammonia—
Singapore, 4 cs. £37

Arsenic—
Wellington, 2 t. £15
Yokohama, 2 48

Barium Chlorate—
New York, 10 c. £46

Boracic Acid—
Wellington, 16 c. £24

Borax—
Wellington, 10 c. £10
Rio de Janeiro, 2 24

Carbolic Acid—
Hamburg, 80 cks. £634
Rotterdam, 43 rnlts. 240
Antwerp, 16 pks. 25
Algoa Bay, 13 cs. 30
Rio de Janeiro, 7 17

Carbonic Acid Gas—
Hawkes Bay, 20 cs.
Fremantle, 70 cylders.

Caustic Potash—
Brisbane, 1 t. 4 c.

Caustic Soda—
Pt. Elizabeth, 1 t. 20 c.
Philadelphia, 130 23
Canterbury, 8 23
Malta, 10
Dunedin, 13
Sydney, 1
Leonka, 2
Natal, 4
Newcastle, 20

als (*otherwise undescribed*)
am, 5 t. 4 c. £70
ra, 98 cs. 130
, 10 41
ma, 1 123
lay, 5 25
ix, 10 cks. 1 34
k, 9 5 245
tle, 19 70
, 10 36
rne, 6 9 260
e, 20 cts. 3 2 10 153

cid—
, 3 cs. £15
, 10 c. 64
, 3 18
n, 2 kgs. 13
P, 3 20
mia, 10 66
3 23
, 11 65
id, 2 15
ma, 10 63
ersburg, 10 65

oducts—
rine
5 cks. 6 kgs. £195
, 250 50 789
ork, 34 753
ax, 13 pks. 379
i, 20 50
ne Dyes
rne, 2 cs. £45
ne Oil
k, 10 drs. £500
ne Salts
1 ck. £30
racene
lorf, 70 cks. £332
sol
rne, 4 cs. £36
rg, 50 cks. 189
dam, 2 drs. 12
sote Oil
250 cks. £140
tha
, 120 cks. £274
thaline
rg, 22 cks. £175
dam, 17 pks. 9
ffin Wax
don, 56 cs. £303
gfors, 150 t. £236
1,000 cks. 600
rt News, 125 106
dria, 400 brls 138
ork, 1,760 599 1,371
sian Blue
lorf, 13 cks. £190
dam, 44 185
dine Bases
rg, 3 drs. £93
gfors, 1,000 cks. £575
y, 15 rnlts. 26
Oil
ar, 12 brls. £10
Sulphate—
es, 15 c. £20
ton, 2 t. 34
of Tartar—
10 kgs. £51
in, 5 c. 22
gton, 1 t. 10 134
ama, 2 217
y, 1 10 137
ne, 5 451
urne, 2 182
5 27
ectants—
s, 26 pks. £20
e, 11 c. 18
izabeth, 4 cs. 20
urne, 17 46
ca, 80 drs 62
ica, 4 13
ar, 72 pks. 18
y, 12 5 58
Town, 68 38
urg, 56 14
—
rneau, 340 t. £3,400
sia—
la, 5 cs. £22
e—
irk, 5 t. £30
and, 153 450
real, 4 16 c. 120
n, 61 17 345
va, 11 5 67
y, 90 278
tion, 199 607
s d'Olon'e, 110 470

Rouen, 40 165
Nantes, 9 17 47
Oxalic Acid—
Syra, 4 cks. £33
Phosphate—
St. Kitts, 15 t. £35
Vera Cruz, 1 8 c. 35
Phosphorus—
Madeira, 1 cs. £12
Sta Cruz de Teneriffe, 4 44
Potash—
Melbourne, 1 t. 18 c. £79
Potassium Carbonate—
Yokohama, 10 c. £13
Potassium Chlorate—
New York, 3 t. 15 c. £148
Potassium Cyanide—
Madras, 6 t. 12 c. £350
Andernach, 2 cs. 7
Potassium Iodide—
Algoa Bay, 4 cs. £112
Potassium Prussiate—
Cologne, 4 cks. £63
Salicylic Acid—
Cape Town, 2 cs. £35
Salt Cake—
Bremen, 150 t. £225
Saltpetre—
Rio de Janeiro, 2 t. 9 c. £55
St. Petersburg, 2 18 66
Wellington, 1 5 27
Sydney, 1 22
Cape Town, 13 14
Adelaide, 1 21
New York, 1 14 46
Montreal, 12 2 251
Salts of Potash—
Townsville, 13 t. £1,218
Sheep Dip—
Wellington, 100 drs. £12
Adelaide, 200 cs. 500
Natal, 2,000 15 c. 463
Soda—
Algoa Bay, 1 t. £20
Soda Crystals—
Rosario, 17 c. £10
Sodium Bicarbonate—
Jamaica, 2 c. £7
Auckland, 1 t. 8
Colombo, 3 12 32
Rangoon, 1 7
Paris, 5 100
Napier, 2 13
Marseilles, 6 45
Sodium Prussiate—
Ghent, 8 c. £21
Strontium Carbonate—
New York, 1 t. £32
Strontium Nitrate—
New York, 6 t. 10 c. £154
Sulphur—
Mossel Bay, 1 t. 7 c. £16
Cape Town, 1 7 15
Sulphuric Acid—
Rangoon, 2 t. 10 c. £93
Natal, 10 cs. 10
Superphosphates—
Bluff, 163 t. 4 c. £204
Tartaric Acid—
Wellington, 5 c. £31
Yokohama, 1 t. 1 129
Melbourne, 1 40 kgs. 380
Sydney, 1 10 146
Cape Town, 6 37
Auckland, 25 150
Brisbane, 1 5 152
Napier, 3 25

LIVERPOOL.

Week ending September 16th.

Albumen—
Santos, 1 t. 2 c. 3 q. £157
Hamburg, 12 26
Alum—
Montreal, 12 t. 10 c. 3 q. £64
Alexandretta, 6 2 29
Santos, 2 6 1 10
Havana, 3 4 2 15
Casablanca, 1 5 1 6
Varna, 2 3 2 10
Valencia, 19 3 5
Calcutta, 21 16 1 10
B. Ayres, 1 11 2 7
Melbourne, 5 1 2 26
Galatz, 8 42
Ancona, 2 2 11

Aluminium—
Rangoon, 1 cs.
Aluminous Cake—
Melbourne, 11 t. 2 c. 3 q. £45
Calcutta, 15 1 3 66
Ammonium Carbonate—
Fairwater, 1 t. 6 c. 1 q. £37
Gothenburg, 1 1 2 38
Stettin, 3 5 2 92
Danzig, 10 14
Hamburg, 1 1 28
Rotterdam, 5 7
Marseilles, 5 6
Para, 1 2 3 36
Ammonium Chloride—
Philadelphia, 15 t 10 c. £404
Piræus, 4 1 q. 7
Syra, 4 6
Rotterdam, 2 10 51
Odessa, 1 10 53
Sourabaya, 32 360
Sydney, 1 2 3 16
Galatz, 6 9
Trieste, 7 8 258
Hamburg, 5 6
Genoa, 3 2 62
Constantinople, 1 1 37
Alexandretta, 1 12 53
Fiume, 5 7
Alexandria, 1 2 35
Ammonium Sulphate—
Bordeaux, 20 t. 8 c. 3 q £150
Cheribon, 80 17 2 743
Samarang, 102 15 1 900
Honolulu, 25 6 2 197
Las Palmas, 6 6 51
Sourabaya, 102 1 3 879
Palermo, 5 42
Anhydrous Ammonia—
Melbourne, 2 t. £50
Barium Chlorate—
Oporto, 4 c. £16
Bleaching Powder—
Baltimore, 229 cks.
Bordeaux, 19
Boston, 476
Calcutta, 127 cs.
Genoa, 61
Ghent, 74
M. Video, 10
Nantes 10
New York, 293
Norrkoping, 135
Paris, 20
Philadelphia, 58
Riga, 115 kgs. 5 brls.
Rouen, 160
San Sebastian, 29
Syra, 4
Windsor Mills, 51
Bone Ash—
Stockholm, 35 t. £217
Boracic Acid—
Hamburg, 1 t. £30
Yokohama, 2 19 c. 75
Adelaide, 5 8
Sydney, 3 5 1 q. 108
Borax—
D lagoa Bay, 1 t. £20
B. Ayres, 2 3 c. 3 q 43
Rotterdam 3 17 76
Montreal, 4 12 91
Barcelona, 4 16 1 96
Genoa, 2 9 49
Santander, 6 4 3 112
Adelaide, 1 2 20
Brisbane, 1 2 1 21
Melbourne, 1 5 2 25
Antwerp, 16 4 1 315
Tampico 7 2 10
Alexandria 4 5
Sydney, 8 5 164
Carbolic Acid—
Odessa, 9 c. 2 q. £34
Trieste, 11 31
Genoa. 19 3 62
Santander, 17 2 60
B. Ayres 8 t. 18 2 230
Baltimore, 5 cs. 17
Hamburg, 11 7 743
Carbonic Acid Gas—
Cape Town, 13 cs £64
Caustic Potash—
New York, 10 c. £17
Caustic Soda—
Adelaide, 65 dms.
Antwerp, 26 brls.
Bahia, 62
Barcelona, 100 cks. 50 pks.
Batavia, 3
Bilbao, 31
Bombay, 20
Boston, 50 14
Brisbane, 20
B. Ayres, 15
Calcutta, 40
Corunna, 300 50
Dunedin Wharf, 32 bxs.
E. London, 32 cs.
Fairwater, 57
Fiume, 75
Galatz, 65 kgs.
Genoa, 35
Hamburg, 240
Havana, 15
La Guayra, 36
Leghorn, 91
Lisbon, 1
Madras, 7
Malaga, 30 brls.
Melbourne, 24
M. Video, 60
Montreal, 85
N. Orleans, 50
New York, 725 60
Norrkoping, 10
Odessa, 475
Oporto, 60
Para, 20
Paris, 55
Philadelphia, 180
Portland, Or., 15
Puerto Cabello, 15
Quebec, 35
Rio de Janeiro, 20
Rotterdam, 149 100 3 cks.
San Francisco, 146
Santander, 10
Savanilla, 1 cs. 20
Seville, 107
Stockholm, 6
Sydney, 93
Tampico, 49
Valparaiso, 1
Vera Cruz, 100
Vigo, 34

Chemicals (*otherwise undescribed*)
Stettin, 4 t. 8 c. £—
Venice, 6 11
Vera Cruz, 12 36
Rotterdam, 1 4 43
Hamburg, 2 4 75
Alexandria, 1 35
Smyrna, 1 35
Salaora 4 7
Valparaiso, 17 6
Odessa, 6 10 105
Newcastle, NSW, 1 30
St. Petersburg, 1 117
Calcutta, 20 5 55
Portland, O., 160 17 1 q. 766
San Francisco, 20 4 94

China Clay—
Bombay, 198 cks.
Boston, 563 t. 1,235 bgs.
New York, 100
Philadelphia, 400

Citric Acid—
B. Ayres, 15 c. £80

Coal Products—
Aniline Dyes
St. John's, N'fld., 1 cs.
Aniline Oil
Barcelona, 9 cks.
Genoa, 2 dms.
Lisbon, 1
Aniline Salt
Boston, 24 cks.
Genoa, 8
Creosote Oil
Bordeaux, 550 brls.
Tar
Bonny, 2 brls.
St. John's, N'fl., 50½ 62½ cks.
Sourabaya, 50 100 rnlts.

Copper Sulphate—
Danzig, 18 c. 2 q. £14
Braila, 1 t. 17
Antwerp, 6 11 3 106
Newfairwater, 1 10 2 24
Ibrail, 2 10 40
Leghorn, 2 3 2
Mossel Bay, 3 47
Christiania, 10 9
Paris, 4 19 2 76
Barcelona, 5 1 80
Salonica, 1 4 19
Odessa, 3 1 50
Nantes, 11 10 1 180
Constantinople, 1 5 23
Galatz, 4 3 1 64
Gutujewsky 5 77
Catania, 33 3 62
Palermo, 8 17 1 138
Genoa, 12 1 185

Copperas—
Galatz, 2 t. 10 c. £6
Alexandretta, 2 16 5

Disinfectants—
Calcutta, 12 c. £5

Guano—
Sourabaya, 100 t. 1 c. 1 q. £1,000
Tarragona, 20 153

Iron Oxide—
Philadelphia, 5 t. 2 c. £128
Oporto, 1 12

Lamp Black—
Manaos, 1 brl.

Lime—
Little Popo, 7 t. 10 c. £16
Lagos, 18 1 q. 19

Magnesia—
New York, 15 cks. 23 cs.
Ponce, 2
Mayaquez, 1 c. 3 q. £10

Magnesium Chloride—
Rangoon, 5 t. 1 c. £20

Magnesium Sulphate—
B. Ayres, 10 cks.
Lisbon, 8

Manure—
St. Nazaire, 1,500 t. 2 c. £5,285
Havre, 240 2 830

Muriatic Acid—
Pernambuco, 1 t. 6 c £14

Oxalic Acid—
Sydney, 2 t. £68

Paint—
Brass, 1 ck.
B. Ayres 68
Cadiz, 10 dms.
Campana, 135
C. C. Castle, 2
Cartagena, S.A., 37 cs.
Chama, 13 kgs. 8
Cienfuegos, 32
Curacao, 58 pks.
Degama, 4
Gibraltar, 13
Hamburg, 15 1
Havana, 4 43
Hong Kong. 51
Iquique, 10 cs.
Iquitos, 70
Jaffa, 2 12
Kurrachee, 31
Kingston, 2
Lagos, 50
Lanzarote, 58
Lisbon, 2 14 138 15
24 brls.
Manaos, 6
Mayaquez, 90 tins
Mossamedes, 2 cs.
New York, 24
Para, 21
Ponce, 4 45
San Juan, 6
Sierra Leone, 160
Smyrna, 80
Valparaiso, 40 brls.

Painters' Colours—
Alexandria, 30 cks.
Bahia, 4 cs. 1 70 kgs.
Baltimore, 100 brls.
Batavia, 100
Bombay, 28 35 crts. 641 pks.
Calcutta, 3 5 20 dms. 112
Ceara, 3 10 kgs.
Constantinople, 510 25 brls.
E. London, 1 cs.
Hong Kong, 5 tcs. 5
Iquitos, 3 1
Marseilles, 16 20 15
M. Video, 30 cs. 1
Para, 4 74
Rangoon, 200 bgs
Rio de Janeiro, 6
Rotterdam, 30 cs.
St. Johns, N'fld., 3
Santander, 1
Santos, 2
Valparaiso, 50
Vera Cruz, 100 5 tcs.

Paraffin Wax—
Genoa, 1 ck. 10 cs. 21 bgs.
Lisbon, 10
New York, 2

Phosphorus—
San Francisco, 1 c. £15
Kingston, Jam., 1 3 q. 25
Vera Cruz, 6 cs. 80
Hiogo, 1 t. 200

Picric Acid—
New York, 18 c. £90

Potassium Bichromate—
Havana, 4 c. 2 q. £10
Vera Cruz, 2 t. 14 2 127

Potassium Carbonate—
New York, 2 c. £3

Potassium Chlorate—
St Petersburg, 60 t. £2,288
Copenhagen, 3 10 c. 140
Konigsberg, 15 30
Kingston, Jam., 1 40
Antwerp, 15 30
Vera Cruz, 1 9 60
Hamburg, 1 40
Genoa, 12 24
New York, 3 15 142
Lisbon, 5 10
Rotterdam, 2 18 122
Hiogo, 25 940

Potassium Cyanide—
Amapala, 6 c. 2 q. £30

Potassium Prussiate—
Genoa, 1 t. £121

Salt—
Accra, 17 t. 10 c.
Antwerp, 75
Bakana, 20 2
Baltimore, 665
Barbadoes, 65
Barcelona, 2
Calcutta, 554
C. C. Castle, 20
Christiania, 11 10
Delagoa Bay, 8 18
Drewin, 5
Ghent, 85
Halifax, N S., 110
Jamaica, 293
Kingston, 8
Manaos, 7 3
Matadi, 24 18
Melbourne, 175
Newcastle, 350
New York, 65
Para, 33
Picton, N.S., 500
St. John, N.B., 270
Salt Pond, 25
Stockholm, 100 7 1,000 bgs.
Sydney, 13
Trinidad, 35
Vera Cruz, 20 cs.

Salt Cake—
Antwerp, 225 t. 4 c. £293
Genoa, 24 16 50

Saltpetre—
Rio de Janeiro, 2 t. 12 c. 2 q. £60
Ceara, 14 3 17

Sheep Dip—
M. Video, 18 t. 7 c. 2 q. £475
Calcutta, 2 4 50
B. Ayres, 104 11 2 2,558

Soap—
Adelaide, 640 cs.
Algoa Bay, 1,564 bxs. 96
Assinee, 20
Axim, 320
Baltimore, 44 1 ck.
Barbadoes, 745
Bermuda, 50
Bombay, 125 79
Boston, 5
B. Ayres, 2
Calcutta, 16
Cape Town, 1,929 50
Chefoo, 34
Christiania, 200
Cochin, 25
Copenhagen, 11
Curacao, 346
E. London, 1,843
Freemantle, 800
Galatz, 7
Gibraltar, 100
Gd. Canary, 520
Havre, 260
Hong Kong, 200 dms.
Honolulu, 50
Iquitos, 500
Kurrachee, 15
Kingston, 350
Lagos, 1
Las Palmas, 101
Leghorn, 10
Madras, 40
Malta, 30
Manaos 1,030 1
Montreal, 500
Mossamedes, 1
N. Orleans, 40
New York, 16 cks. 132
Patras, 36
Penang, 34
Piræus, 30
Pt. Natal, 16 30
Pt. Elizabeth, 118
Rangoon, 3
Rotterdam, 508
St. John's, N'fd., 215 4
St. Lucia, 171
Shanghai, 1,661
Singapore, 1,658
Smyrna, 1
Sydney, 3,500
Tampico, 1
Teneriffe, 1,600
Trinidad, 775
Yokohama, 4

Soda Alkali—
Lisbon, 75 brls.
Odessa, 200
Quebec, 25
Seville, 50
Brisbane, 4
Smyrna, 50

Soda Ash—
Ancona, 6 cks.
Antwerp, 150 bgs. 11
Baltimore, 1,502
Barcelona, 55
Boston, 1,531 19 tcs.
Brisbane, 20
B. Ayres, 250 brls. 345
Calcutta, 75 kgs. 133
Copenhagen, 247
Corfu, 30
Dunedin Wharf, 34
Genoa, 598 10
Ghent, 20
Gothenburg, 8
Hamburg, 2,304
Hiogo, 219
Honolulu, 50 kgs. 10 bls.
Melbourne, 3 tcs 136
Montreal, 50 84 brls.
New York, 500 82 tcs. 129
Norrkoping, 20
Philadelphia, 600 193
Piræus, 20 brls.
Portland, Or., 60
Puerto Cabello, 20
Rio de Janeiro, 50 200
Riga, 98
San Francisco, 50 cs. 155
Smyrna, 100 100 brls.
Sydney, 267
Vera Cruz, 50

Soda Crystals—
Bahia, 10 cks.
Batavia, 50
Boston, 30 brls.
B. Ayres, 20
Calcutta, 50 kgs.
Genoa, 6
Honolulu, 45
Lisbon, 1
M. Video, 20
Montreal, 10 100 100
250 bgs.
Philadelphia, 336 444 95

Sodium Arseniate—
Lisbon, 3 cks.

Sodium Bicarbonate—
Algoa Bay, 50 kgs.
Antwerp, 15 cks. 105
Baltimore, 200 150
Batavia, 17
Bordeaux, 20
Boston, 100
Calcutta, 40
Cartagena, S.A., 60
Christchurch, 20
Christiania, 70
Dunedin Wharf, 50
Galatz, 23
Gibraltar, 400
Hamburg, 50
Havre, 50
Hong Kong, 30
Honolulu, 2 35
Marseilles, 10
Madras, 20
Melbourne, 230
M. Video, 20
Montreal, 16 100 bgs. 85
Nantes, 50
Para, 10
Paris, 40
Philadelphia, 90
Rangoon, 110 cs.
Riga, 10 brls. 40
San Francisco, 40
Seville, 86
Singapore, 4
Stettin, 100
Sydney, 330
Talcahuano, 20
Tripoli, 28

Sodium Carbonate—
Boston, 140 bgs.

Sodium Chlorate—
Genoa, 4 kgs.
Ghent, 20
Hamburg, 10 cks.
St. Petersburg, 82 kgs.

Sodium Peroxide—
Sydney, 1 t. 3 c.

Sodium Silicate—
New York, 10 cks. 10 brls.
Oporto, 16
Rotterdam, 15
San Sebastian, 32
Tampico, 32
Valencia, 500 bgs.
Vera Cruz, 10 cs.

Sodium Tartrate—
Montreal, 1 ck.

Starch—
Copenhagen, 3 cks.
Lisbon, 5 bgs.

Strontia—
Hamburg, 110 t. 6 c.

Sulphur—
Ceara, 9 c. 3 q.
Montreal, 75 t.
Boston, 175 4
Jeddah, 3

Sulphuric Acid—
Rio de Janeiro, 1 t. 8 c. 2 q.

Superphosphates—
Lisbon, 10 t.
Nantes, 236 1 c. 2 q.

Tartaric Acid—
Tampico, 12 c.

Tin Crystals—
Lisbon, 6 c.
Valencia, 6

Varnish—
Madras, 3 cs.
M. Video, 4
Para, 2 dms.
Piræus, 1

White Lead—
Bahia, 50 kgs.
Kurrachee, 20 cks.
Para, 5 brls.
Sierra Leone, 27
Sydney, 200
Wellington, 20

Whiting—
Callao, 50 sks. 67 brls.

Zinc Oxide—
Lisbon, 10 c.

MANCHESTER

Week ending September 16th.

Ammonium Carbonate—
Hamburg, 8 cks. 10 kgs.
Rotterdam, 3 4

Aniline Colours—
Hamburg, 2 cs. 2 pks.
Rotterdam, 4 cks.

Aniline Oil—
Hamburg, 5 dms.
Antwerp, 5
Rotterdam, 9 9 tins

Aniline Salt—
Rotterdam, 20 cks

Anthracene—
Rotterdam, 30 cks.

Antimony—
Bombay, 2 cks.

Colours—
Sannesund, 15 brls.

Cottonseed Oil—
Tripoli, 10 brls.
Tunis, 73

Glue—
Antwerp, 16 cks.
Rotterdam, 10

Manganese Carbonate—
Hamburg, 4 cks.

Paint—
Bombay, 1 ck.

Paraffin Wax—
Hamburg, 20 bgs.

Salt—
Rotterdam, 160 t.

Tallow—
Rio de Janeiro, 26 cks.

Tar Salts—
Copenhagen, 12 bgs.
Hamburg, 15 cks.

Toluol—
Rotterdam, 22 cks. 43 dms.

HULL.

ending September 12th.

—
, 2 cks.
ium Sulphate—
k, 77 bgs.
rg, 99
Soda—
12 cks.
, 25 dms.
35
als *(otherwise undescribed)*
dria, 6 pks.
rp, 1 ck. 32 cs. 16
agen, 106 45
ania, 14 25
eim, 349 slbs.
20
burg, 15 16
1 1 pk.
n, 30
, 1
dam, 50
36 100
, 17 30
ersburg, 70 5
seed Oil—
dria, 259 c.
rp, 843
rdam, 600
agen, 334
k, 4
burg, 200
rg, 373
gen, 99
sberg 200
dam, 737
olm, 202
, 100
te—
ork, 250 cks.
iffs *(otherwise undes.)—*
iania, 24 bgs.
, 3 cks.
dam, 6 kgs.
ork, 54 cks.
d Oil—
dria, 4 c.
rdam, 103
, 35
iansand, 104
hagen, 79
iansund, 18
iania, 638
heim. 138
, 101
urg, 235
dam, 102
ger, 72
e—
irk, 120 t.
rn, 68
, 10
ha—
rp, 4 cks.
—
urg, 2 cks.
—
nburg, 3 cs.
ers' Colours—
ndria, 2 dms.
rp, 35 cks. 3 cs. 1 pk.
rdam, 10 1
110
en, 8
n, 1 1 130
antinople, 8
hagen, 2 1
tiansund, 84
tiania, 1
theim, 7
a, 24
gsberg, 7
orn, 10
koping, 5
York, 135
rdam, 2
7
holm, 60 4
in, 12
—
erp, 260 t.
—
l, 30 t.
—
en, 12 cs.
holm, 1
in, 1
w—
terdam, 7 cks.
kholm, 3

Tar—
Bremen, 8 cks.
Copenhagen, 42
Christiansund, 5
Gothenburg, 20 cs.
Hamburg, 13
Stettin, 5
Treacle—
Bergen, 25 cks.
Varnish—
Alexandria, 1 cs.
Antwerp, 8
Hamburg, 1 ck.
Marseilles, 3

GLASGOW.

Week ending September 17th.

Ammonia—
Bombay, 5 cs.
Ammonium Sulphate—
Rotterdam, 2 t. 10¼ c.
Barbadoes, 60 16½
Demerara, 95 8½
France, 46 1
Philadelphia, 25 3¾
Borax—
Amsterdam, 3 t. 14 c.
Carbonic Acid Gas—
Rangoon, £108
Chemicals *(otherwise undescribed)*
Sydney, £30
Coal Products—
Aniline Dyes
Calcutta, £30
Carbolic Acid
Rotterdam, 5 t. 5 c.
Creosote
France, £480
Creosote Oil
Hamburg, £32
Russia, 375
Pitch
Christiania, £20
Rotterdam, 10 t. 10 c.
Calcutta, 59
Riga, 5
Tar
Calcutta, £61
Madras, 64
Riga, 450 brls.
France, 35
Rangoon, 70
Russia, 381
U.S.A., 55
Coal Products *(otherwise undes.)—*
Rotterdam, £629
Dyestuffs *(otherwise undes.)—*
Sydney, £22
Extracts—
S. Australia, £25. 7s.
Iron Sulphate—
Bombay, £85
Linseed Oil—
Cape Town, 1 t. ¾ c.
Delagoa Bay, 2 12¾
Hong Kong, 1 1½
St. John's, 1 3
Logwood—
Oporto, 3 t. 6¾ c.
Victoria, £67
Manganese—
Rotterdam, 10 t. 1 c.
Manure—
Demerara, 13 t.
Paint—
Adelaide, £53
Sydney, 241
Wellington, 103
St. John's, 49
Painters' Colours—
Oporto, £60
Adelaide, 101
Algoa Bay, qty.
Cape Town, ,,
Colombo, ,,
Calcutta, 158
Demerara, ,,
Port of Spain, 23
Rangoon, 195
Trinidad, 127
Turkey, ,,
Paraffin Wax—
Oporto, £28. 10s.
Riga, 16 t.
Russia, £1,550
Phosphoric Acid—
Trinidad, £20
Potash Salts—
Delagoa Bay, £325

Potassium Bichromate—
Melbourne, £23
Rotterdam, 221
Potassium Sulphate—
Sydney, £43
Salt—
Valparaiso, 1 t. 13 c.
Talcahuano, 451 13
Soap—
Valparaiso, 1 t. 16½ c.
Calcutta, 2 14¾
Colombo, 1 18½
E. London, 2 10
Barbadoes, 1 2½
Trinidad, 1 7
Sodium Bichromate—
Antwerp, 1 t. 12½ c.
Sulphur—
Demerara, £28
Sulphuric Acid—
Colombo, £35
Madras, 51
Calcutta, 21
Rangoon, 350
Trinidad, 50
Tallow—
Turkey, £215
Treacle—
Christiania, 12 t. 19 c.
Christiansand, 7 16
Varnish—
Sydney, £23

TYNE.

Week ending September 12th.

Alkali—
Hamburg, 5 t. 5 c.
Rotterdam, 10 11
Copenhagen, 1 14
Amsterdam, 13 16
Alum—
Amsterdam, 6 c.
Ammonium Chloride—
St. Petersburg, 5 t. 2 c.
Antimony—
Antwerp 1 t. 10 c.
New York, 45
Rotterdam, 9 10
St. Petersburg, 5
Barium—
Genoa, 2 t. 12 c.
Rouen, 15 1
Barium Carbonate—
New York, 26 t. 5 c.
Rouen, 25 10
Bleaching Powder—
Bergen, 5 t. 4 c.
Antwerp, 132 9
Hamburg, 10 3
Rotterdam, 9 11
Horsens, 5
New York, 50 2
Helsingfors, 9 11
Lisbon, 2 1
Gothenburg, 20 2
Copenhagen, 42 4
Amsterdam, 10 8
Caustic Soda—
Genoa, 30 t. 9 c.
Antwerp, 4 18
Hamburg, 72 13
New York, 33 9
Helsingfors, 2 15
Wiborg, 30 8
Aalborg, 4 7
Copenhagen, 5 16
Chemicals *(otherwise undescribed)*
Ergasteria, 4 c.
Colours—
Genoa, 1 t. 6 c.
Gypsum—
New York, 37 t. 14 c.
Lamp Black—
Gothenburg, 2 t. 18 c.
Linseed Oil—
Montreal, 5 t.
Litharge—
Antwerp, 10 t. 8 c.
Hamburg. 1 17
Oporto, 6
Gothenburg, 1 2
Copenhagen, 17
Amsterdam, 1 2
Magnesia—
Antwerp, 3 q.
Hamburg, 1 t. 2 c.
St. Petersburg, 3 7
New York, 1 2

Manure—
Genoa, 117 t.
Ochre—
Bergen. 9 c.
Oxalic Acid—
Odense, 1 t. 4 c.
Paint—
Hamburg, 4 c.
New York, 17 t.
Helsingfors, 3
Abo, 6
Soda—
Middlefart, 141 t. 12 c.
Christiania, 12 14
Antwerp, 6 3
Rotterdam, 22 3
Randers, 29 6
Nakskov, 10 15
Svendborg, 5
Helsingfors, 46 17
Wiborg, 17 9
Abo, 16 11
Lisbon, 5 2
Oporto, 7 2
Gothenburg, 5 3
Amsterdam, 10
Soda Ash—
Christiania, 14 t. 3 c.
Gothenburg, 13 14
Sodium Hyposulphite—
New York, 10 t. 4 c.
Sodium Silicate—
Rotterdam, 5 t. 1 c.
Sodium Sulphate—
Antwerp, 50 t. 2 c.
Copenhagen, 20
Sulphur—
Antwerp, 10 t. 1 c.
Drammen 200
Gothenburg, 200
Superphosphates—
La Rochelle, 530 t. 7 c.
Tar—
Helsingfors, 2 t. 8 c.
Varnish—
Ergasteria, 1 c.
White Lead—
Helsingfors, 6 c.
Oporto, 12 t. 18
Copenhagen, 2 12
Montreal, 2 5

GOOLE.

Week ending September 9th.

Benzol—
Boulogne, 24 cks.
Rotterdam, 47
Chemicals *(otherwise undescribed)*
Amsterdam, 20 cks.
Antwerp, 2
Boulogne, 8
Coal Products *(othe wise undes.)—*
Antwerp, 5 cks. 2 dms.
Boulogne, 105 2 cs. 2
Ghent, 1
Hamburg, 1
Harlingen, 2
Rotterdam, 126
Colours—
Amsterdam, 11 cks
Boulogne, 2 2 cs.
Harlingen, 20
Dyestuffs *(otherwise undescribed)*
Ghent, 2 cks. 4 cs.
Hamburg, 143
Rotterdam, 46 1
Manure—
Dunkirk, 545 bgs.
Hamburg, 605
Pitch—
Antwerp, 538 t.
Soap—
Ghent, 1 cs.

GRIMSBY.

Week ending September 12th.

Chemicals *(otherwise undescribed)*
Hamburg, 44 cks.
Coal Products *(otherwise undes.)—*
Dieppe, 63 cks.
Hamburg, 5 cs. 10 btls.
Rotterdam, 1 dm.
Colours—
Antwerp, 4 cs. 3 pks.
Dieppe, 1 ck.
Hamburg, 2
Rotterdam, 2

PRICES CURRENT. WEDNESDAY, SEPTEMBER 23RD

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids :—			
Acetic, 25 °/₀ and 40 °/₀ .. ..per cwt.	5/9 &	8/6	
,, Glacial .. .. ,,		40/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. ..per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1¾
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	5	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B .. .. per lb.	0	0	2¾
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &	35/-	
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	12	6
,, ,, (grey) Hull .. .. ,,	7	10	0
Aniline Oil (pure) .. .. per lb.	0	0	10½
Aniline Salt ,, ... ,,	0	0	9½
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9½
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to	65/-	
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to	30/-	
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9¾
Benzol, 90 % .. .. per gallon	0	4	9
,, 50/90 ,, ... ,,	0	3	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	6½
,, (crude 60°) .. .. per gallon	0	1	9
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	11	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	47	13	9
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	36	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	10	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magnesia .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. .. per ton	2		
Manganese, Sulphate .. .. ,,	16		
,, Borate .. .. per cwt.	2		
,, Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils :—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	18		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	20		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. ..nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	20		
,, ,, (Caustic Potash) 70/75 % .. ,,	19		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % ..nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % . ,, ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4		
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3		
,, ,, (Soda Crystals) .. .. .. ,, ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton.	18		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda)(f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	6		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25% .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. ..per cwt.	0		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	8		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	6		
(Roll Brimstone) .. .. ,,	6		
,, Brimstone : Best Quality .. .. .. ,,	4		
Superphosphate of Lime (26% .. .. ,,	2		
Tallow .. .. ,,	18		
Tin Crystals .. .. per lb.	0		
,, English Ingots .. .. per ton	62		
Zinc (Spelter) .. .. ,,	16		
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5		

THE

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AND

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CURRENT TOPICS.

GASEOUS POISONING.

QUITE recently two more sad fatalities have occurred through what in the chemical trade is familiarly known as "gassing."

In both of these cases, although the one occurred in a sewer and the other in a coal mine, it is possible that with suitable rescuing apparatus, the life of the original victim might have been saved, while it is certain that the lives of the rescuers would not have been seriously imperilled. As it was, in both cases the would-be rescuers nearly sacrificed themselves in their humane endeavours.

In the colliery case death was due to carbon monoxide, which is well-known to be as troublesome as it is deadly. But the sewer accident was due to a sudden inrush of sulphuretted hydrogen, and probably a certain amount of carbon dioxide. Their presence was only to be expected, yet despite this their sudden occurrence entailed the loss of one life and nearly involved two others.

We have said quite enough in the past to show how necessary it is that the present slipshod way of dealing with cases of this nature should be changed for a more systematic and reliable procedure. We have, however, not contented ourselves with merely saying what ought to be done, for we have long been endeavouring to get together all the information extant, and summarise the same in a brief description of tested rescuing appliances and a comprehensive code of rules relative to their use.

The task, which we knew to be fraught with trouble and delay, has proved even more extensive than we expected. It is with satisfaction, however, that we are at last able to state that our arrangements are now practically completed, and that we hope to devote considerable space in an early issue to the statement of our case for the universal provision of the oxygen bottle and like appliances in "gassy" localities.

It is a matter which appeals very closely to a great many industries outside the chemical trade, and we shall welcome any effort or inquiries from the former which will tend to extend the knowledge of these life-saving appliances.

MORE ABOUT BORAX.

We have good reasons for believing that our remarks of a month or two back concerning the then newly-formed chemical and borax company aroused considerable interest, and on this account we think the following expression of opinion, which has reached us from across the water, is worth recording.

It will be remembered that the new company was the result of the amalgamation of the interests of Redwood's Chemical Works and a certain party closely connected with the Pacific Coast Borax Company.

This party is none other than Mr. F. M. Smith, who practically owns all the Californian borax deposits, and is

the controlling spirit of the borax works at Alameda Point, which we have just alluded to.

It is, therefore, specially interesting to us on this side to hear in his own words what he thinks of this coalition of forces, and as he has been interviewed on the subject we are able to do so. Here they are:—"My European deal involves the organisation of a company in England that will absorb an English Chemical Company, and a very large portion of the output of our Californian borax mines. This English Company will then put Californian borax on the European market, and will enter into competition with the borax that finds its way there from various parts of the world. We shall build a large refinery (probably at Liverpool) to which the raw borax will be shipped from California, where it will be refined for the market. I will hold the control of it, and it will be managed right here and have its headquarters on this coast, so that it will be in reality a Californian institution though organised to handle foreign trade. This is something that I have been trying for some years, and I have at last accomplished it. . . This will at once double, and, in a very short time, treble the output of Californian borax in its raw state, though it will not have any great or immediate effect upon our works on Alameda Point."

The foregoing enables us to see a little better where we are, as it were. Somehow, the prospectus as issued here seemed to convey the impression that we were acquiring something, whereas it appears from the utterances of Mr. Smith that we are being acquired instead.

UPS AND DOWNS IN AMERICAN CHEMICAL TRADE.

It is as well to school oneself to take the bad with the good, as more or less of both comes to all in time, but we are sorry to learn that the first efforts to make bleaching powder in the States have proved so unfortunate for the *entrepreneurs*.

Not so very long back we learned that the Erie Chemical Company had been started, and that they were the first and only manufacturers of bleach in the States. To-day, however, there is not even a first and only, for it appears that the influence of the Wilson Bill in reducing the price of salt cake, and certain internal difficulties, have proved too much for the new venture. From the first there was a vacuous and desolate sound about the "first and only" claim, and there seems to have really been something eerie about the Erie bleach after all.

Nevertheless, it is rough on the losers, who have our sympathy and wishes for better luck in the new start that is to be made under Mr. A. Campbell, who hails from Irvine, N.B. We trust that his entrance into duty may prove as propitious as the arrival of the historical Campbells. Shake!

PURE BEER COMMITTEE.—The Treasury Minute appointing the promised committee "to inquire into and report upon the questions whether legislation is required to prevent the use of deleterious substances in the manufacture of beer, and whether the materials of which beer may be composed can be defined by law without undue interference with the liberty of brewers to use any wholesome materials in brewing" has been issued. The committee will consist of the following:—The Earl of Pembroke and Montgomery (chairman), Dr. James Bell, C.B., F.R.S., late principal of the Inland Revenue Laboratory; Sir J. H. Gilbert, F.R.S., the agricultural chemist; Professor Odling, F.R.S., F.C.P., Professor of Chemistry, Oxford University; Mr. H. W. Primrose, C.B., C.S.I., chairman of Board of Customs; and Mr. Clare Sewell Read, with Mr. W. Blain, of the Treasury, secretary. The Chancellor of the Exchequer has taken great pains to secure experts of the highest standing, and the presence of Lord Pembroke and Mr. Clare Sewell Read on the committee is sufficient assurance that the claims of agriculture have been fully considered. The committee propose to hold their first meeting almost immediately, and to sit during the recess.

AUSTRALIAN MANUFACTURING EXPORTS

ALTHOUGH in none of the Australian colonies have manufac industries assumed anything like the proportions assumed in and more densely-populated countries, several have secured a foo and afford promise of steady expansion, especially in New South W which has overtaken the adjoining colony of Victoria in the wa manufacturing production, and in addition to supplying local re ments in various directions, generally has a surplus quantity ava for export, chiefly to the other colonies and various parts of the W Pacific. Some indication of the extent to which the manufac commodities for export has become expanded in New South W afforded by the Customs and other official returns of that colony, show not only the quantities and values of the total exports, but those manufactured in the colony. The leather industry, by rea the abundance of raw material and of tanning material, occupi leading place, the value of home-made leather exported in 1895 £279,281, against £137,293. in 1891, the total value for the intermediate years being £1,020,881. The bulk of the leather is the United Kingdom, where it is in good demand by reason of its ex quality. The exports of colonial-made *leather belting* were val £2,796., Queensland being the leading customer. The expo saddlery and harness came to £2,112., Queensland, New Zealand and New Caledonia being the largest purchasers. Althoug siderable quantities are annually imported from the United Ki and elsewhere, and colonial-made goods hold the leading place Australasian markets by reason of their superior quality, cheap leather, and greater suitability for colonial requirements. C made boots and shoes of the value of £7,366., were exported, to Queensland and Western Australia. This branch of manufac industry is extending, and is likely to become one of the most imp in the colony. Many thousands of building bricks are annua ported to Victoria, New Zealand, and elsewhere, the total num 1895 being 280,541, valued at £339. Several thousand fire were also sent to Queensland, Fiji, and the South Sea Islands. exports of locally-made brushware and brooms amounted to £1 Queensland being the principal consumer. A considerable quan brushmakers' materials were exported, mostly to Victoria, going to Germany. Building materials are largely exp chiefly to Germany, also cordage and rope, the value of in 1895 being £6,552. Among other articles of export confectionery, *candles*, fancy goods, farinaceous foods, gas mats, matting, mattresses, petroleum, baking powders, *soap*, &c. exports of carriages and carts were valued at £3,441.; carts wagons, £1,054; and of carriage makers' materials, £2,852. values of other colonial made exports were—*Sulphuric acid*, £3,3 furniture, £5,336; grindery, £2,950; iron casting, £1,619; galva wire netting, £33,739.; machinery, £8,464.; and biscuits, £3, The amounts may appear limited compared with the values of ex exports from older countries, but they represent the surplus of co manufacturing production after satisfying local requirements. I earlier days of the colony the successful establishment of manufac industries was rendered difficult, not only by the deficiency of sk labour and the prevailing high rates of wages, but also by the abs of cheap and rapid means of communication with the interior and other colonies. With the steady increase of population and exp of the railway system, the order of things has become changed, the manufacturing industries of New South Wales, although ye their infancy, give promise of a great and flourishing future.

THE MUNICIPAL TECHNICAL SCHOOL OF MANCHESTER.

ON Wednesday, September 30th, an inspection of these buildings by the Municipal Technical Committee was mad the presence of a selected number of guests. The members of the Council met at the new school now in process of erection at Sackv street at noon, when the Lord Mayor fixed a tablet declaring the s of the school, after which a second tablet was fixed by Mr. R. D. Ba shire, setting forth the gifts of the legatees of the late Sir Joseph W worth, and the donation of the guarantors of the Manchester E Jubilee Exhibition, 1887, in aid of the buildings and equipment of school. After these proceedings the company walked round the bu ing, which has now begun to appear above the level of the adjoi street, and after a lengthy inspection proceeded to the Town H where luncheon was served. The toast of "Her Gracious Majesty Queen" was received with great enthusiasm, and the fact of Majesty having completed the longest reign of any British sover was commented on by the mover of the toast. "The Right Hon able the Lord Mayor" was the next toast, also drunk with g enthusiasm. The proceedings terminated with a toast to the chair of the Technical Instruction Committee, Mr. Alderman Hoy. replying to this toast, Mr. Hoy referred in terms of great respec

those who had preceded him in the early stages of the development of the Technical School, and a letter was read from Mr. Harry Rawson detailing at some length reminiscences of the old Mechanics' Institute. It is not our present intention to present our readers with any further details of the construction of the building, as there will be ample time when operations have become more advanced. Suffice it to say, however, that the arrangements seem admirably adapted to the objects in view, though in size, the space occupied does not compare with the vast buildings of Charlottenburg, Hanover, or Zurich. There is yet room for development in this important subject, and there is no doubt that when the time comes Manchester will be able to provide whatever further accommodation may be needed.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Bunsen Burners. H. A Köhne. 20,283. September 14.
Nitric Acid Regenerator. J. Walter and C. Lehmann. 20,290. September 14.
Blending and Mixing Pigments. H. Williamson. 20,295. September 14.
Improvements in Process and Apparatus for Electroplating. M. Black 20,329. September 14.
Artificial Stone. J. Grunhut. 20,432. September 15.
Apparatus for Clarifying Saccharine Solutions. L. F. Haubtmann. 20,434. September 15.
Treating Fat. T. Coad. 20,438. September 15.
Recovering Precious Metals from their Solutions. A. J. Boult. 20,504. September 16.
Artificial Manure or Fertilizer. A. Schepitzky. 20,509. September 16.
Obtaining Calcium Carbide of Uniform Composition. J. A. Denther. 20,598. September 17.
Drying Cement Slurry, etc. G. G. M. Hardingham. 20,603. September 17. (F. D. Cummer, Belgium.)
Artificial Stone. P. Kleber. 20,612. September 17.
Soldering Aluminium. H. Facer. 20,679. September 18.
Improved Manufacture of Cements, Whiting, etc. C. O. Trechmann 20,693. September 18
Process and Apparatus for the Treatment of Sewage, etc. J. B. Petrie. 20,733. September 19.
Improved Treatment of Indiarubber. H. Millington and T. H. Parry. 20,753. September 19.
Producing Formic Aldehyde and Apparatus therefor. J. J. A. Trillat. 20,773. September 19.
Improved Sheep Dipping Powder. W. O., T. O., O., and W. B. B. Quibell. 20,792. September 19.
Manufacturing Thorium Hydrate. B. Kosmann. 20,794. September 19.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Manufacture of Chlorates, and in Means and Appliances therefor. J. Hargreaves, Farnworth in Widnes, Lancashire. Eng. Pat. 16,259. August 30, 1895.

In the preparation of chlorate of soda, a tower is charged with hydrated carbonate of soda in pasty condition, over which chlorine gas is passed. The chlorination takes place chiefly at the bottom of the tower (where the gas enters), which is specially constructed to this end. The sodium chloride, which salts out, is removed periodically through a door provided for the purpose, while the chlorate liquor, after passing through a saturator where any excess of chlorine is taken up by more soda, is pumped to the top of the tower, a portion being used for dissolving undecomposed soda, and the remainder being forwarded to the concentrating pans. Instead of towers a series of vessels can be used. In making the potash salt, the chloride is used, mixed with hydrated magnesia or lime. The towers also have to be constructed differently internally, owing to the impermeability of the mixture. Advantage is taken of the relative solubilities in the separation of the chlorate of potash, which in this case sinks to the bottom while the chloride of calcium is drawn off. The lixiviation and chlorination can be conducted at a high temperature in the case of potash, but for soda heat is not advantageous. In washing the chlorate of potash free from chloride of calcium, &c., ice-cold water is used, in which the chlorate of potash is practically insoluble. Special attention is paid to the economical construction of the towers, in connection with which there are three drawings. Seven other figures show the construction of the soda and potash plants.

Improvements in Apparatus for the Production of Ozone. E. Andreoli, 147, Cold Harbour-lane, Camberwell. Eng. Pat., 10,372. May 14, 1896.

The ozoniser is specially constructed with hollow electrodes through which a cooling fluid can circulate. There are eight figures. This particular form presents certain advantages which commend it for the commercial production of ozone, since the air or oxygen is exposed for a considerable time to the silent discharge, the glow of which is done away with. The electrifying surface is also large, and the whole apparatus can be worked continuously for long periods.

An Improved Method of Treating Hides and Skins, for the purpose of removing lime and other undesirable matter therefrom, and preparing the hides and skins for being immersed in, or otherwise treated by, tannin. J. A. M'Intosh, Love-lane, Quayside Newcastle-on-Tyne. Eng Pat., 5 644 March, 23, 1896.

After the liming process, the hides are treated, under pressure, with a solution of carbon dioxide in water, in a hermetically sealed vessel. The lime, etc., is "killed," and the pores of the skins opened, so that they can be introduced into stronger tannin than is usually employed. They absorb the tannin more readily, and are more quickly prepared for currying. There are two figures.

An Improved Method of Treating Seaweed to Obtain Valuable Products therefrom. A. Krefting, Karl Johansgade 10, Christ'ania, Norway. Eng. Pat. 11,538. May 27, 1896.

The patentee separates what he calls tang-acid which is not nitrogenous. He explains in full the difference between it and the algin-acid obtained by E. C. C. Stanford. To extract the product the seaweed is treated with dilute sulphuric acid, which decomposes the lime salt of tang-acid present. The seaweed is unaltered, and has all its original cohesive power. The weed is then treated in the cold with a weak solution of carbonate of potash or soda. The alkaline salt of tang-acid is soluble in water, and when washed out completely loosens the fibres of the seaweed. The tang-acid can then be precipitated from solution by the addition of dilute sulphuric acid. The advantages of the process are its simplicity and rapidity, and the absence of the need of heating.

Improvements in the Manufacture of White Lead. W. P. and W. Tatham, both of 226, South Fifth-street, Philadelphia, U.S.A. Eng. Pat. 13,886. June 23, 1896.

Finely-crushed litharge is added to neutral or basic lead acetate solution at about 80°F., if one vessel is used, or 160°F. if two are employed. Tribasic acetate is formed, the crystalline mass, along with the mother liquor, being treated in the same vessel or vessels with carbon-dioxide, so converting the mass into white lead, and re-forming neutral acetate, which is used again on more litharge. The white lead is filtered, washed, and dried as usual.

Improvements in and Relating to the Desilverisation of Lead. W. H. Howard, Pueblo, Colorado, U.S.A. Eng. Pat. 15,542. July 14, 1896.

This is an improved detail in the Parkes' or zinc process. Much pure lead is mechanically retained in the crust or alloy of zinc, gold and silver which rises to the top, as the latter is of a mushy nature. In the usual subsequent sweating process some of the lead is liberated, as it melts at a lower temperature than the alloy, but even then a great deal of molten lead is retained in the pores of the crusty alloy. The crust is therefore subjected to pressure in a hydraulic or other press, squeezing out the lead before it has time to solidify, the very heat resulting from the pressing helping to keep the lead molten, and dispensing with the sweating process and all additional external heat. The specification is illustrated with several figures.

Improvements relating to the Preparation or Treatment of Bones and Mineral Phosphates for Fertilising Purposes. R. Silcock, Thornton Hall, Poulton-le-Fylde, Lancashire. Eng. Pat., 20,303. October 28, 1895.

After the customary treatment in the mixing pot, flue gases are passed through the mass, raising it to about 600°F. Finally, superheated air is injected, raising the temperature to 800° or 1,000°F. The contents are then discharged into the den, where it dries to a nicely powdered manure, which does not rot the bags.

Improvements in the Manufacture of Soap. J. W. Barclay, 41, West Chiselhurst-park, Eltham, Kent. Eng. Pat., 19,021. October 15, 1895.

Unsaponifiable oils are mixed with soap to impart disinfecting and other properties. The invention deals with the methods of solidifying the said oils so as to enable them to be incorporated with ordinary soap. Different methods are employed, of which treating with alkali and resin, and crutching the hot oil into melted soap, may be mentioned.

THE BRITISH ASSOCIATION.

CHEMICAL SECTION.

PAPERS AND PROCEEDINGS.

MANUFACTURE OF SODIUM NITRATE.

DR. WILLIAM NEWTON (London) contributed a paper on "Nitrates: Their origin, occurrence, and manufacture." He remarked that only within the last few years had it been acknowledged that, with the exception of the leguminose (peas, beans, cloves, &c.), plants could not draw their sustenance from the soil unless their nitrogenous food existed as nitrates. In consequence, for ordinary crops, such as grain or roots, whatever chemical or organic manure was applied to the soil was unavailable as food until converted by microbes into nitrate. Every fertile soil contained a small amount of nitrates, derived from the decomposition of organic substances in the presence of suitable basic compounds, assisted by climatic influences. Nitrate of potash accumulated in valuable quantities on the organically rich alluvial plains of India and China. The nitrate rose to the surface with the moisture by capillary attraction in the hot dry season. There had also been discoveries lately in South Africa of nitrate of potash of a high degree of purity, and said to be in enormous quantities, derived from the direct putrefaction of animal excreta. These deposits were at long distances from any means of transport to the coast, and as would be expected from their origin, occurred only in pockets scattered over a wide area. The world's chief supply of nitrate was, however, that of the northern provinces of Chili. The nitrate, mostly nitrate of soda, there occurred in a narrow band following the eastern foot of the coast line of hills, at an elevation of 3,000 to 4,000 feet, and at a distance, in direct line from the sea, varying from fifteen to thirty-five miles, extending from Pisagua in the north to Antofagasta in the south, about 250 miles. There was an immediate rise from the coast of 1,500 feet. From fifteen to thirty-five miles inland rose the coast line of hills, forming a granite barrier 2,000 feet in height. Between them and the Andes stretched a plain whose width was from thirty-five to forty-five miles. The conditions of this district were ideal for the production and concentration of nitrate. The cold of the south polar current running up the coast, and the chain of high Cordilleras to the east, rendered the district between them absolutely rainless. The west to east section of the Chili nitrate district was much the same at any point. Owing to its rainless condition, this plain was almost absolutely devoid of vegetation. Previous vegetation had been abundant, as shown by the remains of forests a few inches below the surface. In addition to these remains quantities of organic matter were carried down by the mountain floods. The decomposition of this organic matter forms nitrate in the ordinary way, but the nitrate had no growing vegetation to absorb it, and was therefore carried in solution by the drainage waters of the west side of the Andes, which was always percolating under the surface of the plain, and at periods of about eight or nine years even completely flooded it. These waters collected by the surface at the lower side of the plain against the coast hills, and there evaporated under the hot dry atmosphere.

THE CRUDE NITRATE

was found under a layer of a few inches of loose dust. The first layer of nitrate bearing strata was extremely hard rock, containing from 10 to 20 per cent. of nitrates, and varied from a few inches in thickness to 16 and 18 feet. It was bored through to reach the richer caliche, which contained sometimes as much as 70 to 80 per cent. of nitrate. The caliche layer also varied in thickness up to sometimes seven feet. In the extraction the boring was continued through this, and the whole mass upheaved by blasting powder. Rock nitrate was neglected, and the caliche carted away to the crushers, from thence to large iron boiling tanks, 32 by 6 feet broad and 9 feet deep. In each of these tanks were five or six coils of steam pipes, and the boiling was done by steam at about 50lbs pressure.

THE BOILING TANKS

were connected in series of six, so as to allow of proper lixiviation. The liquor of the tanks, called "caldo" (soup) was run off from 112 degrees to 108 degrees Twaddel. It then contained about 80lbs. of nitrate to the cubic foot, of which it deposited about 40lbs. in cooling to 25 degrees centigrade in the open crystallising tanks. The mother liquor, containing sometimes over two grammes of iodine to the litre, after five or six days was drawn off into reservoirs, and is pumped up to

THE IODINE HOUSE,

where it was treated with bisulphite of soda, and, after the deposition of the iodine, was, of course, used over again in the solution of the nitrate. The growth of the industry was shown by the fact that whilst the shipments in 1860 were 50,000 tons, in 1895 they were 1,218,000. But though the production had so greatly increased, and now involved *many millions of capital, the*

WASTEFUL STYLE OF WORKING

used in early days in small works producing a few tons a week is continued in works producing 250 tons a day. The laborious and expensive borings were made by hand labour; the caliche was carted in a primitive manner over loose roads; the crushing works were mostly among the hills; and the boiling by indirect heat was slow, leaving about 12 per cent. and upwards of nitrate in residuum which was thrown away. The chief neglect, however, was that of the millions of tons of nitrate-bearing strata, which now lay broken up over large areas, and contained in the aggregate vastly more nitrate than the caliche.

SALT IN THE ISLE OF MAN.

Professor W. Boyd Dawkins, M.A., F.R.S., delivered an address on "The Geology of the Isle of Man." He pointed out that the geology of the Isle of Man presented points worthy of the attention of the Geological Section, and referred to a survey which he had made during the last ten years of the island, and the discoveries found by means of borings carried out under his advice through the thick covering of drift in the north. From a boring made at the Point of Ayre salt was found. The salt set in at 500 feet below the surface, and the total thickness of the rock salt was 33 feet 6 inches, the two thickest beds being 20 feet and 9 feet 6 inches. Besides these, a brine run 2 feet 6 inches in depth occurred at a depth of 615 feet 5 inches from the surface. The depth of the saltfield remained unproved. The discovery of this saltfield was of considerable value, because it linked on the saltfield at Carrickfergus with those of Barrow and of Cheshire, and showed that the Irish Sea was a basin in which the salt-bearing triassic marls were deposited. They might conclude from this identity of structure between the districts of Barrow and Black Combe, in the Lake District, and of the rocks of the North of Man, that there was little hope of the south-western extension of the Whitehaven coalfield so gallantly sought for by Messrs. Craine in their borings. The discovery of a saltfield was a most valuable addition to the mineral wealth of the island. The discovery, also, of the great Irish elk in the peat near St. John's, and in the forest on the shoreline near Strandhall proved that the island was united to Ireland or Britain in the prehistoric age.

NITRIC ACID CHLORINE.

Dr. F. Hurter read a paper dealing with the industrial aspects of processes proposed for the manufacture of chlorine by means of nitric acid. All these, he said, labour under the fatal disadvantage that the treatment involved in the economical production of chlorine and recovery of the valuable nitric acid necessitates the concentration of a very large amount of sulphuric acid, the expense connected with which was too great to allow of its application on the large scale.

Mr. E. K. Muspratt pointed out a further objection to the process in question, arising from the difficulty of finding any suitable material capable of resisting the action of the strong acids used.

LOW TEMPERATURE RESEARCH

Professor J. Dewar then made a communication relative to some of the results which he has obtained at exceedingly low temperatures. Some results obtained with helium were, he said, of special interest, for this gas is less easily condensible than hydrogen and has a remarkably low real molecular volume and refractivity. It is a remarkable fact that fluorine, the most active of the chemical elements, in these respects resembles helium, the least active of all. Moreover the relation of the refractivity of hydrogen to that of chlorine is almost the same as that of helium to argon, a fact which lends some colour to the view that, just as fluorine is intermediate between hydrogen and chlorine, a substance may yet be discovered which will occupy a similar position between helium and argon. Professor Dewar also described his methods of measuring the low temperatures produced in his experiments.

Dr. C. A. Kohn exhibited two new forms of apparatus, and presented the report of the Committee on Quantitative Methods in Electrolysis.

CHEMICAL EDUCATION IN ENGLAND AND GERMANY.

Sir Henry Roscoe read a paper on chemical education in England and Germany. He said the question of how far scientific, and especially chemical, education in Germany was superior to that in England, and how far that superiority had influenced the German chemical industries as against our own, was one which at the present moment had come into prominence. That in Germany the appreciation of the national value of scientific education was greater than it was at the present day in England was, he thought, a universally admitted fact. In Germany they found Government institutions of every kind for the advancement of the highest scientific education in all its branches, and many Englishmen, chemists especially, had not been slow to avail themselves of the generosity of the German nation in opening to all comers their laboratories and their universities. The question might well be asked, had the admitted want of this larger developed highly scientific instruction in England been detrimental

the prosperity and progress of chemical industry in this country? On the other hand, had the existen e of this facility in Germany fostered chemical manufactures and trades in that country? If this was so the point to inquire was in what way could we in England be placed in a position to successfully compete with Germany? Although he was not one of those who took a pessimistic view of our national industries, chemical or otherwise, he had no doubt that many of the complaints which they heard were well founded. In the opinion of some the evil was to be found in the want of appreciation of science and of original research on the part of the manufacturers. Others again took a more general view, and saw the origin of the difficulty in the system of university education, especi lly in our older seats of learning, where science teaching was not given free scope, and where too great a weight was laid on examinational results, and little encouragement given to original scientific investigation. Those who took this view further insisted that if science found its legitimate expression in the university curriculum and available honours, schools would not be slow to take up the matter and to see that their instruction was made to lead up to university requirements, and thus the general scientific instruction in the country would be improved. Both of these causes were probably at work in preventing that direct application of chemical research to industry upon which alone its future success must depend. Our English laboratories and our English professors were as fully competent to turn out a finished article as were our German friends but if the article was not in demand it was useless to manufacture it. Then, again, the raw material must be good, and it was an unfortunate fact that in this respect the Germans excelled us. They had a recognised national system of secondary education We had none. To remedy this evil, to organise our secondary educa ion was the first step towards attaining the position which the higher scientific education occupied in Germany. It was to be hoped that the recommendations of the Royal Commission, of which he had the honour to be a member, would form the basis of a measure to be brought forward in Parliament next session. But meanwhile what was to be done? Surely we must continue to urge upon the Government that more substantial aid be granted than hitherto had been the case to places where the highest scientific instruction was given, and amongst these Liverpool University College was one of the most deserving What, then, we really needed at present was a recognition by the State of the necessity of the highest form of scientific education It was quite true that a large sum of money, about £740,000. a year, was now devoted to what was called technical instruction, but the greater part of this money was now devoted, some might think rightly, though others might be of an opposite opinion, to the furtherence of a less advanced instruction than was needed for striking out new paths in science That our craftsmen should be brought up to the level of the requirements of the day was right and proper, and therefore he for one had always upheld the establishing of technical schools throughout the country, even if they did not attempt to do everything.

The President said they could not emphasise too much that the great want in scientific and chemical education in England was a properly organised system of secondary education Professor Ramsay (London) said the improvement of secondary education was of the greatest value, but to get at the source of the trouble they must look to the universities A change in our university system was required, but it was difficult to say how that was to be brought about.

The discussion was continued by Professor Fritzgerald, Professor Campbell Brown, and others.

GRANTS FOR SCIENTIFIC PURPOSES.

At a meeting of the General Committee held to receive the report of the Committee of Recommendations the Committee recommended that grants for scientific purposes should be made to the following sections: —*Mathematics and Science*, total amount, £320.; *Chemistry*, £80.; Geology, £95.; Zoology, £325.; Geography, £20; Economic Science and statistics, £20.; Mechanical Science, £10; Anthropology, £180.; Physiology, £275; Botany, £20.

TREATMENT OF MANCHESTER SEWAGE.

AN inspection of the Manchester sewage precipitation works at Davyhulme was made this week by members of the Corporation Sewage Committee and others. We have therefore been able to gather the following particulars as to the present conditions of working. The whole of the sewage, as it arrives at the works, is treated with lime and copperas, the quantity of milk of lime used varying from five to ten grains per gallon, with about an equal quantity of sulphate of iron. Daily analyses of the sewage and effluent have shown that the average purification effected by the treatment is rather over 50 per cent The albuminoid ammonia in the untreated sewage was, on an average, 0·4 grains per gallon, and in the tank effluent it was 0·2. The eleven precipitation tanks are each 300 feet long and 100 feet wide, and fall from the north to the south end, where the decanting valves are placed. These valves, it is considered, would be more efficient if fixed in the usual position near to the north or shallow end of the tanks. That matter is therefore receiving the attention of the city surveyor. The average depth of the tank is six feet, and their total capacity 12,375,000 gallons Two land filters at the works have been completed. Each has an area of fifteen acres These filter areas have been intermittently used during the early part of the summer, with partial success. The quantity of effluent filtered was small, about 50,000 gallons per acre per day of 24 hours, a total of about one and a half million gallons per day. The quality of the filtrate was described as "good," but considerable difficulty was experienced in keeping the surface of the filters in condition They have, therefore, recently been dug over, cleaned, and laid down in ryegrass, and will soon be ready to be again put into operation. Two small artificial filters, constructed for the purpose of experiment, are still being worked, and the results regularly recorded.

The quantity of crude sewage treated at the works last year was 5,128,586,000 gallons. From this 4,150,328 cubic feet of wet sludge was produced or taken from the receiving tanks. After being taken from the tanks the wet sludge is compressed by machinery into "pressed cake" Of this latter 38,375 tons were made from the wet sludge last year. About 40 per cent. of the pressed cake was taken by farmers for use on the land, and the remaining 60 per cent. used to fill up the old bed of the river Irwell. When the steamship for conveying the sludge to sea is in use, the sludge will be put on board as it is taken from the tanks. If there should be any demand for the pressed cake at a remunerative rate the Corporation will continue to use a sufficient quantity to cover that demand, and the machinery will still be available for loading the steamer by air compression. The whole cost of treating the sewage at the works last year was £11,198.

IMPORTS AND EXPORTS FOR AUGUST.

WHATEVER the gross aspect of the Board of Trade returns for last month may be, they are still unsatisfactory as far as the chemical trade is concerned. In the imports chemicals are less, while there is a marked decrease in the exports of alkali, bleach, and chemical manures, which is again chiefly due to the small demand for the two first in the U.S A.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE

Articles.	Quantities. 1895.	1896.
Margarine ..... Cwt.	75,435	75,177
Copper Ore and Regulus..... Tons.	17,802	24,227
Pyrites..... ,,	48,182	34,708
Tin ..... Cwt.	68,678	91,834
Alkali ..... ,,	24,318	18,474
Brimstone ..... ,,	53,214	8,741
Dyes, Coal Tar ..... £.	64,646	54,233
Saltpetre ..... Cwt.	22,267	26,035
Petroleum ..... Gall.	11,808,438	14,258,840
Turpentine ..... Cwt.	105,204	74,344
Guano..... Tons.	3,493	813
Nitrate of Soda ..... ,,	3,384	938
Paraffin ..... ,,	42,985	47,789
Rosin .... Cwt.	126,103	159,921
Tallow and Stearine..... ,,	245,995	161,922
Oil Seed Cake ..... Tons.	27,275	22,865
Wood Pulp..... ,,	24,371	25,025

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1895.	1896.
Alkali ..... Cwt.	479,220	323,363
Cement ..... Tons.	40,635	25,217
Coal and Coke ..... ,,	3,427,625	3,284,360
Copper, all kinds ..... Cwt.	92,324	61,927
Iron and Steel ..... Tons.	259,414	311,596
Chemical Manures ..... ,,	46,632	35,145
Oils, seed ..... ,,	3,673	5,044
Salt ..... ,,	79,912	55,508

CHANGE OF ADDRESS.—Messrs. Henderson, Craig, and Co., Ltd., of London and Edinburgh, advise us that their Manchester office (under Mr. Boinville) has been removed from 18 to 22, Old Corn Exchange, Manchester, where business is now being carried on as usual.

Reports of Companies.

ELECTRICAL COPPER COMPANY, LIMITED.

The statutory general meeting of the Electrical Copper Company, Limited, was held recently at the offices, 14, Sherborne-lane, E.C., under the presidency of Mr. H. M. Matheson (the chairman of the company).

The Chairman said: The statutory meeting is quite a formal one, but I may just report that all the preference shares have been allotted and paid up in full The patents have all been transferred to the company. There have been applications both from Germany and the United States with reference to our disposing of the patent right, but we prefer to await the results of the works which we are about to erect at Widnes before we part with any of these rights on the Continent or in America. We have secured suitable land at Widnes for the erection of the works, on a long lease of nine hundred and ninety-nine years. The plans of the works are nearly completed, engines and dynamos have been ordered, and, according to the dates when all the machinery will be delivered, we expect to be in operation early next year. The experimental works at Paris have been taken over by the company. They are sufficient for the manufacture of commercial samples, and numerous such samples have been made and reported upon by experts both in England and on the Continent. They are all well satisfied with the copper. Numerous tests have been made by Messrs. Kirkaldy and other experts, which have proved the superior strength and quality of the copper made. A complete series of these tests, as arranged by Messrs. Kirkaldy, is now being carried on, and certificates will be issued which will enable engineers to judge of the suitability of this company's copper for the purposes of their work. I have nothing else specially to report to you; everything is going on quietly and well. If any shareholder has questions to ask which it is convenient for the company should be answered, I am ready to answer them. I should have said, in reference to the preference shares being all allotted, "all those that were issued." We have issued 100,000, and they have all been allotted; but there are still 50,000 to issue by-and-by.

NEW JULIA NITRATE CO., LTD.

The first general meeting of this company has been held. Mr. T. M. Thackthwaite, who presided, said that at the last meeting it was resolved to reconstruct the company, and in accordance with the resolution then passed a new company—the New Julia Nitrate Company—had been formed. The reconstruction had been exceedingly successful, and he had great pleasure in stating that the whole of the shares of the new company had been taken up, the greater part by the shareholders in the old company. This had been done without any cost to the new company, which had 400,000 shares, with a liability of 2s. 6d. per share. This they would have available for the purposes of the new company. He did not think any reconstruction could possibly have been conducted upon more successful lines. They had already paid off the whole of the debenture debt of the company, and they had been able to do that with the money they had received on allotment—*i.e.*, 1s. per share. Other debts of the company had also been paid, leaving them still with a balance on hand. They had made a further call of 6d. per share, which would provide them for some time to come with working capital. At present none of that money had been spent. As soon as they found that the subscription to the new company was assured, they made arrangements for sending out a new manager, Mr. Charles Brooking, who had had a considerable nitrate experience. Mr. E. W. Vincent also addressed the meeting.

EUROPEAN PETROLEUM CO., LTD.

The first ordinary meeting of this company, which was held recently, was an interesting one. In the first instance it gave the chairman—the Marquis of Granby—an opportunity of dealing with certain occult criticisms which have taken place by one or two dissatisfied shareholders, and the plain, straightforward statements of the fact which he placed before the shareholders were at once recognised by those present to be a complete answer in every sense of the term. It has been alleged that there has not been a sufficient amount of working capital, and this we are convinced is the most important point levelled against the company. The chairman, however, in the course of his reply to questions addressed to him, put this beyond all doubt when he informed the meeting that the whole of the working capital, £80,000., had not only been subscribed, but was absolutely being used for the company's benefit. As many of readers have written asking for advice, we think it just as well to give one or two points from the chairman's speech. Being a man of honour, well known and respected, they must carry conviction. "The ships are the property of the company: they are at sea, and working at a profit. The Baku wells are in *full work, and the price of crude petroleum* is now considerably higher than it had ever been. The production extended to about 300 tons p day, and realised 13s. 4d. a ton on the spot. All the properties, cluding the ships, were transferred free from all incumbrance, a were held by persons appointed by the board." There is no doubt the value of these assertions, and those of our readers who have be worried by irresponsible letters which have appeared will know how appraise them at their proper value.

ARTIFICIAL SILK-SPINNING COMPANY, LTD.

Mr Joseph Cash, presiding at the statutory meeting of this Compa said that buildings were in course of construction at Brandon, betwe Rugby and Coventry, for the manufacture of the fabric. There plenty of water, of which they would require a great deal; they coal within easy distance; and there was cheap labour available fr three different districts They expected to be in full working order about five months. No pains had been spared and no time lost. industry was new to the country, but they had had the assistance Mr. Oberle in getting together the necessary plant. He (the chairm had entered upon the business from a purely commercial point of vi as he believed the article would furnish an additional fabric, equal silk, although the tension was not so strong. The fabric would h the appearance of silk at a low price. Some time ago an artificial was brought out which was inflammable; but, by a process of desi tion, that was overcome, and the present article was a commer commodity. Their works would be capable of producing 5,000l week, at a cost of 10s. per lb. This compared with silk at 23s. per The artificial silk was 33 per cent. heavier, but the price was 100 cent. lower. The capital of the company was fully subscribed, they had a working capital of £60,000 In the manufacture of fabric it was not absolutely necessary to use wood pulp, as cotton wa or raw cotton could be used.

CHLORIDE OF GOLD.

WE have recently had an opportunity of judging personally the quality of the chloride of gold which is supplied photographical purposes by Messrs Fuerst Bros., 17, Philpot-la London.

Though put up in the usual form, it presents an advantage in t the tube bears a guarantee label stating the quantity of pure gold c tained therein, on which is reproduced a facsimile of the trade ma which is illustrated herewith.

As the illustration will suggest, this chloride is sold as the "A Brand," by which it is distinguished from other makes. The tubes a made either long or bulb shape, to contain 15, 30, or 60 grains chloride, which is nice and dry, and of trustworthy quality. By reas of its reliability in the matter of strength and quantity it should fi special favour among amateur photographers, while its quality w ensure a welcome from the profession.

A FIRST-CLASS SULPHATE OF AMMONIA SATURATOR.

IT may be news to some of our readers to learn that practically the heavy saturators used at the various sulphate-making gasworks up and down the country come from one town, Bolton, in Lancashire.

Of course, when we speak of "heavy" saturators we refer to tho which are made from lead plates thick enough to enable a timb framing to be dispensed with, and so distinguished from the timb tank lined with lead, the thickness, or rather the thinness, of which h too often proved a delusion and a snare.

It seems fitting, then, that the Bolton Gasworks should possess some thing unique in this line; and the authorities seem to have toed the ma in respect to a new saturator which they have just installed. It is feet long, 5 feet 6 inches wide from back to front, and is made out four solid lead plates 1½ inches thick, forming the top, front, curtain sides, and back, while a fifth plate 2½ inches thick forms the botto The top, besides being supported by a central column, is worked into a kind of dome for the sake of extra strength, and in the makin of the necessary joints the use of sand has been entirely avoided. Th saturator, which, without the accessory pipes, weighs 7 tons 11 cwt has been made by the firm of Joseph Taylor and Co., of Tower Ha Square, Bolton, whose names are doubtless familiar to readers of o advertising columns.

Correspondence.

do not hold ourselves responsible for the opinions expressed by our correspondents.

AN AMERICAN VIEW OF THE PETROLEUM QUESTION.

(*To the Editor of the Chemical Trade Journal.*)

—Your admirable exposition of the merits of the demand that h Test of oil be raised has been read with approval here by miliar with the facts. That a people with the high regard of lish for the sanctity of life, and with their intelligent insistence ery possible sanitary and police regulation for the protection of lic health and safety, should allow their market to be made the ground for refuse American oil is something we, here, ail to comprehend. This oil, known here as "Export oil," is refuse, as it is what is left after the good illuminating oil has ined out of petroleum. *As has been shown* by Government ations here, notably *by the New York Legislative Committee* 1879 investigated the Oil Trust, *forty per cent of the illuminuids* obtained from crude petroleum *is of this inferior sort.* own as "*export* oil" *because* there is *not one American city* or hich *will permit its sale.* It is as explosive in a hot room or day as dynamite It is a matter of vital importance that a be found for it somewhere. Hence, being prevented by law ling it in America, where its dangerous character is known by e, the Oil Trust ships it to England, where no one but the know what it is—and the experts knowing it, favour, for some ous reason, its unrestricted sale. It is often said that the fully d scandal of the corruptions and oppressions worked by the st in America throws a dreadful light upon our political and cial conditions. But the Oil Trust has never yet been able to merica what it does in England—with the help of English —viz., scatter death through the homes of the people by the efuse oil. It does this in England, at a cost of a life a day of oman, or child, not by the tolerance, but by the explicit and permission of the British Government, acting upon expert and advice. What sort of "light" that throws upon the al and commercial conditions" of Great Britain is a question ked among us. The American press, daily as well as weekly, olitan as well as provincial, has exposed from the beginning, still exposing, the encroachment of the Oil Trust and other pon the liberties and prosperity of the people. With the ible exceptions of the *Chemical Trade Journal* and *Food and ion*, I have never seen an English weekly that touched this in its editorial columns, and never an English daily. Even ialist papers are mute about this sacrifice of English life—one on the altar of the greed of a foreign invader, though they are g every field of industry for illustrations of "capitalistic

only two arguments that are advanced to defend the sale of this American oil in England are an insult to the common sense of ople, but they illustrate perfectly the cynical contempt of the lists for the intelligence of the people.

first argument is, that the demand that the Flash Test be so that only safe oil shall be sold, is simply a scheme of the refiners to get "protection" against American competition. g that "protection" is the most unpopular word in Great our oil trust, with characteristic cunning, seeks to fasten it on rt to protect British lives against its deadly product. But how ! The great oil trust, which boasts in one breath that it he *best oil* at the *cheapest price*, whines in the next breath that *el* it to sell safe oil is "protection" for its competitors, and ination against itself!

other argument is that "the lamps are at fault, not the oil" English people are using bad lamps, is not that all the more for allowing only such oil to be sold as will be safe in such That bad oil should be licensed because bad lamps are in use inly exquisite nonsense, and yet that is what the arguments of your experts boil down to.

Flash Test of their wits, not to say consciences, should be s well as that of this refuse oil they are defending.—Yours, &c.,

A STUDENT OF THE OIL TRUST.

York, Sept. 8th, 1896.

IMPURITIES IN FATS.

(*To the Editor of the Chemical Trade Journal*)

—In reference to "Fat Boiler's" letter, in your last issue but he will communicate with me I think I can satisfy his require-

—Yours, &c,

W. B. COWELL.

Windsor-road, Forest Gate, London, E.

Trade Notes.

FIRE AT A PAINT WORKS.—A fire broke out at the paint and oil works of Messrs. Gibson and Mather, in Brown-street, Anderston, Glasgow, last week. The working class tenants in the adjoining buildings fled to the streets, and remained there till all danger was over The works were destroyed, and several horses were burned to death. The damage was very great.

TWENTY-FIVE PER CENT. TARTARIC ACID.—The Victorian Department of Trade and Customs has commenced a campaign against adulteration. Cases have come to the notice of the head of the department in which, to the detriment of the public, articles are being sold which are flagrantly adulterated. Some compound is being sold as tartaric acid which does not contain more than 25 per cent. of genuine tartaric acid, the rest being worthless, if not deleterious matter.

FORTHCOMING SCIENCE PUBLICATIONS.—The north country colleges will be responsible for an unusually large literary output this autumn. Amongst other books to be issued from the metropolitan press may be mentioned a contribution on flat worms in the Cambridge Natural History by Mr. F. W. Gamble, of Owens College, an Introduction to the Study of Chemistry, by his colleague, Professor W. H. Perkin, and an intermediate course of physics by Dr. Arthur Schuster, the Langworthy Professor. Other volumes are promised by Dr. Kelynack and by Professor Boyd-Dawkins. At the Yorkshire College Professor Groom will publish a text-book of paleontology and Professor Miall a series of short nature studies, under the title of "Round the Year."

FIRE AT A CYANIDE WORKS.—At about two o'clock on Saturday last a fire broke out at Chance's Works, Oldbury, in that portion known as the British cyanide section. The outbreak originated in the digester-house, and was presumably due to the explosion of a tube connected with a gauge. In the place where the fire occurred there was a considerable quantity of carbon bisulphide. Some of the men employed in the works and at the alkali-works commenced at once to throw water upon the burning materials, but, owing to the nature of the compound, the water had no effect upon it. The fire brigade also turned out, but they failed to extinguish the flames, and the fire was allowed to burn itself out. The firemen were kept on the premises until about seven o'clock to prevent the flames from spreading to other portions of the premises and adjacent works of Messrs. Allbright and Wilson. The damage was not serious

THE TALLOW MARKET.—The tallow market has become very active, and the low prices still current are causing consumers to buy with more confidence. The large supplies of home melt, which have weighed down prices for months past, have been practically cleared off, and the demand for colonial produce has consequently increased. Large quantities have changed hands, and as the arrivals since the beginning of the month have been light—3,854 casks—it is expected that the return on October 1 will show a considerable reduction in stocks. The quantity sold at the four public auctions during September was 6,822 casks, but, besides this quantity, private sales have also been effected There are, therefore, good grounds for expecting a falling-off in the stocks, which, however, are still very heavy. At the end of August the total was given as 67,793 casks, so that it will require a continuance of the demand to bring the total down to reasonable proportions. The advance in values since the beginning of September may be taken roughly at 1s to 1s 6d per cwt.

NOXIOUS VAPOURS IN MILES PLATTING.—At a largely attended meeting of the Newton and District Sanitary Association, held recently in St. Mark's Schools, Holland-street, presided over by the Rev. S. N. Perry, the following resolutions were unanimously adopted:—"That we again respectfully draw the attention of the Corporation to the condition of this neighbourhood as to noxious vapours. The people in the immediate vicinity of the chemical works are continually suffering from the effects of sulphuretted hydrogen and other gases injurious to health. We therefore earnestly request that steps be immediately taken by the proper authorities to compel the manufacturers to carry on their work without injury to those whose circumstances compel them to live in this district. We are convinced that this can be done by care and proper plant." "That we congratulate the Corporation on having received power from the Local Government Board to manufacture their own gas by-products at Bradford-road Gas Works, and sincerely hope that they will begin to do so as soon as possible, as we believe that such action will greatly benefit this neighbourhood from a sanitary point of view." We do not quite see the connection between the two resolutions. When the Corporation get their tar and residual works in operation they will like the rest be "pollutors," and prone to take quite another view of "noxious vapours in Miles Platting." To us it seems that with the sanction of the L.G.B the District Sanitary Association received its death warrant.

New Steel Process.—The London correspondent of the *Glasgow Herald* writes:—"I hear that the new steel process in which some Glasgow men are interested has been sold to a capitalist here for £500,000. It is claimed that by this process the steel industry, especially in the valley of the Clyde, will be greatly stimulated, owing to the cheapening of the manufacture."

West End Pathological Laboratory.—We have received a prospectus of the chemical department of this laboratory, which is under the conjoint supervision of four directors. A specialité is made of Hygienic and Bacteriological Investigations, and microscopical examinations of all kinds. In addition to such specialities, all the usual run of agricultural analysis is undertaken, including pyrites and burnt ores. Fees and further particulars can be had on application to the secretary, 55, Weymouth-street, London, W.

The Export of Illuminating Oil from Batoum.—According to the "Melbourne Journal of Commerce," in 1895 Russia shipped 292,424,000 gallons of illuminating oil to the following countries:—Austria-Hungary, 29,616,000; Belgium, 10,827,000; Bulgaria and Servia, 3,830,000; China, 12,562,000; Egypt, 8,472,000; United Kingdom, 30,865,000; France, 15,896,000; Germany, 4,836,000; Holland, 4,601,000; Italy, 6,147,000; India, 45,822,000; Japan, 3,800,000; Java, 15,056,000; Turkey, 19,671,000; Far East, 43,107,000

A Lady Sanitary Inspector.—St. George's Vestry, Southwark, last week considered a number of applications for the post of female sanitary inspector for the district, at a salary of £120. per annum, rising by £10. per annum, until a maximum of £150. is reached. The candidates possessed a certificate of the Sanitary Institute. The selection fell to Miss A. Elliott, of St. Helens, Lancashire, who at present holds an appointment as sanitary inspector. This is the first vestry which has made such an appointment in London.

Destructive Fire near Dublin.—The extensive oil gas works of the Dublin, Wicklow, and Wexford Railway Company at Bray were recently burned to the ground. The works were used for the manufacture of train gas. All the trains on the above-named system, as well as those working the City of Dublin Junction Railway, were supplied from the works. The timber work of the building and the quantity of oil, tar, and escaping gas made a great blaze. The connections to some large iron gas tanks were melted, but an explosion was averted by the efforts of the firemen keeping the tanks cool. The premises were fully insured.

Patent Law in Mexico.—The Congress of the Mexican Republic, by decree of 27th May, 1896, has amended article 33, chapter 5 of the law of 7th of June, 1890, relating to patents of inventions in certain particulars. The proprietor of a patent or invention or improvement is obliged to prove to the Minister of Commerce and Industry (Secretario de Fomento) at the end of every five years whilst the patent lasts, and in order to keep it in force for a further five years, that he has paid to the Treasury at the termination of the first five years the sum of $50 as an additional fee; at the end of ten years the sum of $75, and at the end of 15 years the sum of $100. All these payments must be made in Mexican dollars. The time during which it must be proved that these payments have been made is limited to two months after the expiration of the period of five years, and such time shall not be extended. Those persons interested, who up to the date of promulgation of this law may have become subject to the forfeiture established in the third paragraph of article 37 of the law of June 7, 1890, may avail themselves of the provisions of this law in order to relieve themselves from the liability of forfeiture, provided that they duly pay the fees within three months from the date of the promulgation thereof, and without prejudice to the rights which third parties may have acquired after the declaration of the forfeiture.

More Sulphate.—Despite the depressed state of sulphate of ammonia it would seem that there are not wanting those who have faith in the future of this fertilizer, as we learn that Messrs W. Baird and Co., Limited, the eminent firm of iron-masters at Glasgow and Gartsherrie, and known as the Eglinton Iron Company in Ayrshire, where they have for many years had several blast-furnace establishments, have just completed important alterations and extensions at their Eglinton Iron Works, Kilwinning. Three new blast-furnaces of the most improved description were "blown in" a few weeks back, and a complete plant, erected in conjunction with the furnaces, for the recovery of the tar and ammonia contained in the effluent gases, has since been started. The new plant has been designed by, and erected under the superintendence of Mr. Andrew Gillespie, Consulting Engineer, of Glasgow. In order to get the work done as expeditiously as possible, it was distributed among a number of contracting firms, among whom were the Barrowfield Iron Works Company, Limited, Messrs Hanna, Donald, and Wilson, Messrs. Newton, Chambers, and Company, Limited, and the Whessoe Foundry Company, Limited. The excavating, foundation, and building contract was executed by Messrs. Hugh Symington and Sons, of Coatbridge; and the time occupied from starting the foundations until the works were put into operation *was only about twelve* months.

Scheduling Carbolic Acid.—A coroner recently commented on fact that there is no legal restriction upon the sale of carbolic acid, expressed a hope that before long some stringent restrictions would placed upon the indiscriminate sale of this virulent poison. attention of the President of the Local Government Board was dr to these remarks, and it was pointed out that similar views had for past been strongly expressed by coroners throughout the country the Pharmaceutical Society, and the British Medical Association, had constantly urged the necessity for the inclusion of carbolic ac the Poison Schedule of the Pharmacy Act. The following reply been received to the memorial:—"Privy Council Office, Whit September 15, 1896.—Sir,—With reference to your letter of the inst., addressed to the Local Government Board, and forwarde that department to this office, I am directed by the Lords o Council to state that the question of imposing some restrictions on sale of carbolic acid is under the consideration of their lordship am, sir, your obedient servant, J. H. Harrison."

FOREIGN REMITTANCES.

Owing to the inconvenience created by the various ways in w foreign subscriptions are remitted, we respectfully beg to in subscribers that a *Crossed* Money Order is the most satisfa method of remitting, both for them and ourselves. In the case Money Order, a letter advising us of same should always be otherwise, owing to post-office formalities, much delay in tracing acknowledging foreign remittances is inevitably entailed in this ma

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is nothing fresh to report in regard to benzols, save that p are maintained. The tone of the market seems steady, though th certainly rather less doing. There is practically no change in other tar products. Carbolic acids are steady at last quotations, there is no quotable change in naphthas. Creosote and anthracen not call for special mention further than saying that they are st Pitch seems to have no life in it, the quotation still standing 3 31s. 6d., f.o.b. East Coast.

Sulphate of ammonia seems to be even weaker, although there been the usual "cover" demand with the close of the month. forward market will certainly be affected by the fall in the Bec quotation, January to June having been sold at £7. 12s. 6d., b there is nothing to indicate the extent of the transactions at this p it is not so easy to fully estimate the import of the incident. Lo outside makes stand at £7. 12s. 6d., Liverpool £7 11s 3d, £7. 10s, and Leith £7. 7s 6d. to £7 8s 9d, prompt.

REPORT ON MANURE MATERIAL.

The situation remains very much as last reported, buyers showin disposition to follow any upward movement in phosphatic mate Owing to increasing difficulty in finding vessels, raisers do not ca effect further sales of Florida rock for early shipment unless at hibitive prices, but for first half of 1897 shipment there are again se at 6d. per unit, delivered to good United Kingdom ports. For shipment there are sellers of South Carolina and Peace River roc 5¼d. per unit, but for 58/63% Algerian, 5½d is still asked. T are sellers of River Plate bones, October-November shipment, at 12s. 6d. per ton, delivered to good United Kingdom ports, but busi does not result. There would probably be buyers at £3. 11s 3d. ton. Owing to advanced freights, shippers of crushed Karra bones now require about £3. 17s. 6d. per ton, for shipment, bu spot there are sellers at £3. 15s. per ton. In the absence of busin £3. 12s. 6d. per ton must be considered the value of Bombay b meal, for shipment, £3. 15s. being asked for near at hand. Nitrat soda is quiet in all positions, and values are unchanged. Spot p 7s. 10½d. per cwt. for ordinary, and 8s. for fine quality.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is a fair amount of business doing, both prompt and forward delivery—prices generally are in favour of buy In caustic soda forward business is being done at slight concessi below nominal quotations; spot values are as follows:—f.o.b. Li pool, 77%, £9. 5s.; 74%, £8. 5s.; 70%, £7. 7s 6d; 60%, £6 7s per ton, 10 ton lots and upwards. For delivery over 1897 contr are being booked at about 10s. per ton less, f.o.r. In bleaching pow a considerable amount of business has been done upon the inducem in price offered for contracts over 1897, and there is also a better demand at £6. 10s. f.o.r., and £6. 10s. to £6. 15s. f.o.b. Chlor continue to offer at low rates, viz.: soda 5¾d., potash 4½d. per

vered sulphur firm at £4. 12s. 6d. per ton, f.o r. Alkali, 58%, 7s. 6d. per ton, bags, f.o.r , with rather an easier tendency. crystals unchanged. Saltcake steady at 20s., f.o.r., in bulk. iate of copper unaltered at £16. 10s. per ton, f.o b. Acetates of brown and grey, rather dearer, owing to higher freights. Other tes and acetic acid quiet, and without alteration in value. There l a fair inquiry for potash, caustic and carbonate, and stocks are Borax selling at easier rates, though nominally £18., f.o.r. e powdered arsenic in good request at £22. 5s. per ton, f.o r. on. Yellow prussiate of potash now quoted 6¼d. per lb.; iate of soda 5d. per lb. Sulphocyanides dull, and prices are inged.

THE METAL MARKETS.

NDON, WEDNESDAY.—Pig iron unchanged: Scotch warrants i at 46s. 2½d.; Middlesbrough 38s. 2½d. cash, and hematite d. Copper quiet: Chili bars, G.O.B.'s and G.M.B's., closed 47. 15s. to £48. cash, and £47. 18s. 9d. to £48 3s. 9d. three hs. Tin weak: Straits closed at £57. 12s. 6d. to £58. 2s. 6d. and £58. 5s. to £58. 15s. three months; Australian, £58. 15s.; sh ingots, £61. 10s. to £62. Lead: Spanish, £11 6s 3d. to 7s. 6d.; English, £11. 10s. Silesian spelter, ordinary, £16. 15s. el 1s. 2½d. Antimony £29. to £29. 10s. Quicksilver: First , £6. 12s. 6d.; second hands, £6. 12s. *Copper shares* quiet: , 2⅜ to 2½; Copiapo, 2 5/16 to 2 7/16; Libiola, 2⅛ to 2⅜; Mason Barry, 2⅞ to 3⅛; Rio Tinto, 23⅞ to 24; Tharsis, 5½ to 5¾.

ASGOW, WEDNESDAY.—Market steady and idle. Scotch done s. 2d. and 46s. 2½d. cash, also at 46s. 4½d. one month; closing buyers at 46s. 2½d. cash, sellers ask 46s. 3d. Cleveland done at 2½d. cash, also at 38s. 4½d. one month; closing with buyers at 2½d. cash, sellers ask 38s. 3d. Cumberland hematite done at d. cash; closing with buyers at 47s. 2d. cash, sellers ask 47s. 2½d. lesbrough hematite closes with buyers at 45s. 2d. cash, sellers ask d.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

LS.—Palm oil continues firm, but the demand is very limited, being very little doing other than in Lagos, at £23. per ton t. Olive keeps steady, with Malaga, £29. 10s. to £30; Seville, 10s. to £29. 10s.; and Syrian, £27. to £28 per tun. Linseed et, Liverpool makes in export casks being quoted 17s to 18s 6d. wt, according to quality. Cottonseed is fairly steady, at 15s 9d. s. 8d for Liverpool refined, and 16s. 6d. for American. Castor oil is r easier. Good seconds Calcutta are now worth 2¼d. only, irst pressure French figures at 2⅝d. to 2¾d. per lb., thus being rm stronger. Tallow is very firm, and steady in tone, but there een a falling off in the amount of business done. Resin keeps as s ever for common, while the higher grades may possibly show an ice soon. Spirits of turpentine have made a slight spurt, and now steady, at 20s. 6d. per cwt. Petroleum is dearer, American now ng at 6¾d. to 7¾d., and Russian refined, 5¾d. to 5⅞d. allon.

OLOURS.—Prices are steady, and practically without change, es: Oxfordshire, common, £10., medium, £12., best, £15. yshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. lead unchanged. Venetian red, £6. to £10. Cobalt: Pre- oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

LS.—Business remains passive, with little alteration in the ion. The import during the week of linseed has been 14,080 ers—from New York, 7,310 quarters; from St. Petersburg, 6,250 ers; from Riga, 510 quarters; from Harlingen, 10 quarters; ng a total for the year of 524,464 quarters, against 422,056 ers a year ago. The import of cottonseed has been 3,068 tons Alexandria, making a total for the year of 114,259 tons, against 981 tons a year ago There have been no imports of rapeseed g the week; consequently the price of oil has advanced in athy with the paucity of supply. Linseed oil, after declining 5s on to 14s 4½d. naked, experienced a smart rally, and advanced to at which further sellers; for October-December, 15s. 3d. asked; ary-April, worth 15s. 6d.; and May-August, quoted 16s.; boiled refined, £1. to £2. per ton extra. Export for the week has been 0 cwts. Refined cotton oil has improved about 7s. 6d. per ton, ng steady at 14s. naked spot, or next month. November-April realised up to 14s. 6d., at which there are further sellers; casks, £1. and ordinary barrels £1. 10s. per ton extra. Export of refined oil for the week has been 3,960 cwts Olive oil continues firm for best sorts; still, there are inferior qualities offering cheap. We hear of a consignment of olive oil green grease for soap-making coming forward, which is offered at £20 per ton, c i f. in barrels Cod oil, £16. to £18 per ton. Olive oil soap, 60%, £16. per ton, c.i.f.; 65%, £17. 10s Brown Yorkshire grease, £8. Boiled siccative oil, £10. 10s. per ton in barrels. Castor oil unchanged.

CAKES.—In moderate demand. Linseed cakes, steady; 95% pure, £5. 12s 6d. per ton. Russians, £5. 7s 6d Americans, £5. Oil-cakes, £4. 10s. to £4. 12s. 6d. Cotton cakes firm spot, best makes, £4; November-April, £3. 10s. Rape cakes—Black Sea, £2. 17s. 6d.; East India, £3. 7s. 6d. per ton.

PAINTS.—The demand for these articles continues satisfactory, with prices unaltered.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Sulphur is still scarce and firm at the old price. Sulphate of copper is stiffer rather, and inclined to pick up a little. In the standard chemicals there are no additional changes to record since last week. The market is idle at the "Union" prices; outside makers are said (some of them) to be taking rather more of independent action, but there is no visible result as yet. In the mineral oil and solid paraffin section there will be found see under-noted quotations) some writing down of values. Both scale and semi-refined wax are admittedly lower, though only fractionally so, and the actual figures are now given as applying to makes of the best reputation. Possibly some less well-favoured brands may be procurable at a shade under these figures. Burning oils are at the prices quoted, less substantial discounts. The other lines of this section are firm at late prices. Sulphate of ammonia is still not more than £7. 10s for spot, Leith, and there is no immediate promise of recovery, although £8. has been got for well forward delivery—say January to April.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. to £5. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 7s 6d., 60/62° £6. 7s. 6d., and cream 60/62° £6. 5s., all nett, Liverpool; bleaching powder, £6. 15s. nett, Tyne; saltcake, 20s.; borax, English, refined, £18., and boracic acid, £28. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (fo export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4¼d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 1½d.; sulphate of ammonia, £7. 10s. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 5s. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1⅞d. per lb.; paraffin wax, 120° semi-refined, 1 11/16d. to 2½d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 10s. to £4. 15s., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's imports of sugar at Greenock were 26,780 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are dull, with practically no alteration in prices, though shipments are fairly good Soda crystals are still quoted at £2. 2s 6d. per ton, gross weight. Caustic 70% £7. 10s, 76/77% £9. to £9 5s. per ton. Sulphur scarce at £4. 15s. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do, 52%, £4. 7s. 6d. per ton, nett: alkali, 36%, £3. 7s 6d. per ton, nett; white alkali, 48%, £4. 12s. 6d. per ton, nett; do., 50%, £4. 17s 6d. per ton, nett; do., 52%. £5 2s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £5. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett.;

carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham Salt is steady at 9s. per ton, f.o.b Tees.

COALS.—Trade is fairly good, though shipments are being somewhat interfered with owing to recent advance in freights. To-day's prices are:—Best Northumbrian steam, 8s. 3d. to 8s. 6d. per ton; second qualities, 7s. 3d. to 7s. 6d. per ton. Small steam, 3s. 3d. to 3s. 6d. per ton. Gas coals, 6s. 9d. to 7s. 6d. per ton Household coals, 10s. to 11s. per ton. Coke firm, 14s. 6d. to 15s. per ton.

New Companies.

Gittings, Hills and Boothby, Ltd.—CAPITAL £30,000, in shares of £1. each. This company has been formed to acquire and carry on the business of paint and varnish manufacturers, now carried on by Gittings and Boothby, Park-lane, Aston, and M. H. and D. Hills, Long-acre, Nechells, Aston. The subscribers to the memorandum of association are:—M. H. Hills, Hamstead Villa, Great Barr, manufacturer; D. Hills, Hamstead Villa, Great Barr, manufacturer; J. Boothby, Inglewood, Great Barr, manufacturer; Mrs J. Boothby, Inglewood, Great Barr; J. J. Gittings, Laburnum House, Aston, manufacturer; Mrs. J. J Gittings, Laburnum House, Aston; R. M. Hills, Hamstead Villa, Great Barr.

Richard Smith's Executors, Ltd.—CAPITAL £50,000., in shares of £1. each. This company has been formed to acquire the business now carried on by the trustees of the late R. Smith at 82, West George-street, Glasgow; Craiglea Chemical Works, Paisley; and Millburn Works, near Larkhall. The subscribers to the memorandum of association are:—W. Smith, 182, West-street, Glasgow, manufacturing chemist; T. Barge, "Artaman," Row, Dumbartonshire, married woman; J. A. Smith, Torwood Cottage, Row, Dumbartonshire, spinster; J. Smith, Torwood Cottage, Row, Dumbartonshire, spinster; A. Fleming, 182, West-street, Glasgow, cashier; R. Barge, "Artaman," Row, Dumbartonshire, clerk; R. H. Barge, 7, Lower Crosby-street, Manchester, merchant.

G. and F. Milthorpe, Ltd.—CAPITAL, £35,000., in shares of This company has been formed to acquire and carry on at Vicar street Works, Wakefield, Yorkshire, the business of manufacturers printing ink, colour, varnish, composition, and to trade as ge chemical manufacturers and merchants.

Warrington Rubber Works, Ltd.—CAPITAL £100,000, in s of £1. of which 50,000 are preference shares. This company has formed to carry on the business of manufacturers and dealers in r goods, &c. The subscribers to the memorandum of association ar C. R. Sims, 4, Elm Grove, Cricklewood, N.W., clerk; J. Tu Broad-street House, E.C., secretary; E. M. Hart, Langley-road, M Park, S.W., stationer; C. G. C. Ronnolls, 77, Finsbury Park- N., auctioneer; P. G. Sandford, 20, Cullum-street, E.C., chemis H. D. Clarke, 15, George-street, Mansion House, C.E.; H. Carter, Westbourne Schools, Westbourne Park, W., clerk.

Alcatraz, Ltd.—CAPITAL £1,000,000., in shares of £1. of 200,000 are 6% cumulative preference shares. This company has formed to refine and deal in oils, asphaltes, and bituminous substa The subscribers to the memorandum of association are:—A. S 463, Wandsworth-road, Clapham, S.W., clerk; G. Edwards Coolhurst-road, Crouch End, N., secretary; E. H. Wilson, A road, Enfield, N., accountant; D. Amey, 4, Margery Park- Forest Gate, E., secretary; A. T. Brown, 19, Farleigh-road, Newington, clerk; T. W. Doran, 84, Winston-road, Stoke Newin clerk; A. D. Brown, 31, Reighton-road, Upper Clapton, writer.

Doudney and Company, Ltd—CAPITAL £15,000., in £1. s of which 5,000 are preference. This company has been form acquire the business of soap, candle, dye, paint and chemical m facturers carried on at Commercial-road, Landport, Hants. The scribers to the memorandum of association are:—Mrs. M J. P Yarborough-road, Southsea; Mrs J. E. Potter, 44, Clarendon- Bedford; W. Monkhouse, 333, Commercial-road, Portsm manager; W. Pink, Kt., Shrover Hall, Cosham; W. R D. W 70, Elm Grove, Southsea, chemist; H. R Pink, Hillboro' Cres Southsea, merchant; E. H. Cooper, 14, Osborne-road, Sout broker.

IMPORTS OF CHEMICAL PRODUCTS

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 19th.

Acetate of Lime—
U. States, 1,105 bgs. R. E. Drummond

Acetic Acid—
Holland, 4 pks. G. Rahn & Co.
" 30 R. W. Greeff & Co.
" 67 Little & Johnston
" 150 A. & M. Zimmermann

Acetone—
Holland, 2 drs. R. W. Greeff & Co.
" 1 ck. H. J. Lenne & Co.

Albumen—
N. Russia, £30 W. Groom

Ammonium Chloride—
Holland, 10 cks. H. Lorenz

Antimony Ore—
Portugal, 23 t. Union Ltge. Co., Ld.

Asbestos—
Canada, £144 Deering & Robottom
" 5,000 J. Owen
Italy, 12 London Asbestos Co.
Germany, 12 Craven & Co.
Holland, 40 W. Balchin

Barium Peroxide—
Germany, 2 cks.

Barytes—
Belgium, 100 cks. O'Hara & Hoar
Germany, 22 W. Harrison & Co.
Holland, 122 pks. "
Belgium, 185 "

Bleaching Powder—
Holland, 32 cks. J. M. Steel & Co.

Bleaching Soda—
Germany, 125 cs. H. Lambert

Bone Meal—
E. Indies, 300 t. A. Hunter & Co.

Camphor—
Germany, 75 cs. R. Warner & Co.
" 65 tubs S. Figgis & Co.
" 2 cs. L. & I. D. Jt. Co.

Caoutchouc—
Singapore, 240 c. Vokins & Co
B. W. I., 3 Little & Johnston
Zanzibar, 23 Wallace Brs.
" 55 S. Figgis & Co.
" 16 Clarke & Smith
" 9 Hale & Son
" 27 Forbes, Forbes & Co
Singapore, 95 L. & I. D. Jt. Co
Columbia, 31 Prop. Bull Wf.
Madagascar, 36 "
" 8 Procter Brs.
Zanzibar, 171 L. & I. D. Jt. Co.
" 40 Blyth, Greene & Co.

Castor Oil—
Belgium, 28 brls. J. T. Morton
" 40 Lucas & Spencer's Wf., Ld.
" 100 Leach & Co.
" 28 R. G. Hall & Co.

Caustic Potash—
Canada, 28 c. Charles & Fox

Chemicals *(otherwise undes.)*—
Holland, £9 F. Boehm
Belgium, £0 Société John Cockerill
Holland, 11 L. C. & D. Rly.
" 100 B. & F. Wf. Co.
" 27 Typke & King
" 6 A. C. Lloyd
" 37 Hernu, Peron & Co.
Germany, 18 F. Claydon & Co.
" 10 Standard Ammonia Co.
Norway, 210 R. Greening
Germany, 280 H. Lambert
France, 9 Flageollet & Co.
Germany, 30 Phillipps & Graves
U. States, 435 C. Loch
" 1,050 W. H. Smith
Sweden, 19 M. D. Co.
Germany, 325 T. H. Lee
" 1,491 A. & M. Zimmermann
" 60 L. & I. D. Jt. Co.

Citrate of Lime—
Italy, 46 cks Thames S. Tug & L. Co. Ld
" 27 B. Jacob & Sons

Cream of Tartar—
Portugal, 1 ck. B. & F. Wf. Co.
France, 2 "
Italy, 8 Thames S. T. & L. Co.
France, 5 F. C. Devon & Co
" 5 pks. C. F. Gerhardt
" 10 M. Ashby, Ltd.

Dextrine—
Germany, 40 bgs. M. D. Co.

Dyestuffs—
Argols
Italy, 287 pks. Thames S. T. & L. Co.
" 402 B. Jacob & Sons
Cochineal
Canaries, 4 bgs. Sperling & Williams
" 6 Patry & Pasteur
Germany, 20 A. Everingham & Co.
Cutch
Singapore, 100 cs. F. Claydon & Co.
Extracts
U. States, 55 pks. W. Burton & Sons
" 50 brls. F. Claydon & Co
France, 50 cks. L. J. Levinstein & Sons
Belgium, 25 Leach & Co.
" 27 cs. Langstaff & Co.
France, 80 S. M. Frankenstein & Co.
" 30 Union L. Co.
" 40 Bailey & Leetham
France, 25 B. & F. Wf. Co.
Fustic
B. W. I., 12 t. M. Kearton & Co.
Gambier
Singapore, 168 bls. W. Balchin
" 2,368 Adamson, Gilfillan & Co.
" 1,323 P. & O. Co.
" 262 Horsley, E
" 321 bgs. R. Hen
" 236 L. & I. D. Jt
" 261 Berendorf &
Japan, 186 T. J. & T. P
Indigo
E. Indies, 3 chts. P. Madi
Logwood
Belize, 98 t. W. Sh
B. W. I., 393 Benckendorff &
Shumac
Italy, 350 bgs. Bevington &
" 150 Scriven Bro. &
" 250 McDou Bond
" 502 J. Kitchin
" 50 J. F
" 100 H. Johnson &
" 35 Hicks, Nash &
" 200 J. E.
" 250 Clark, Gray &
" 200 Beresford &
" 50 J. Knill &
" 70 R. W
Tanners' Bark
U. States, 22 t. H. Kohnst
Germany, 133 Baxter & Sl
Natal, 50 A. & W. Ni
" 100 Flack, Chat &
Turmeric
E. Indies, 123 bgs. Beresford &
Valonia
A. Turkey, 31 t. A. & W. Ni
Dyestuffs *(otherwise unenumerated)*
France, 8 bls. Burnett & S
Farina—
Germany, 50 bgs. R. G. Hall &
" 100 Seaward
" 50 Ohlmschlager
Holland, 50 J. Knill &
Gamboge—
Singapore, 10 cs. L. & I. D. Jt.

ucose—
J. States, 50 pks. 250 c. R. Johnson & Co
,, 100 576 Ohlenschlager Brs.
France, 200 200 W. E. Cole
,, 200 200 Barrett, Tagant & Co.
Germany, 75 196 R. G. Hall & Co.
J. States, 1,000 1,000 G. Clark & Sons
,, 150 900 T. J. Lipton
,, 100 600 E. & T. Pink
,, 4,639 4 639 Pearce Pelly & Co.
,, 1,500 1,500 T. M. Duche & Sons
,, 50 288 J. Keiller & Son
,, 100 100 L. & I. D. Jt. Co.
,, 361 613 Bellamy & Co.
,, 299 1,718 Deering & Robottom
,, 480 480 Fellows, Morton & Co.
Holland, 30 60 J. Barber & Co.
U. States, 8,739 15,814 R. G. Hall & Co.

ue—
Germany, £60 Steinhoff, Sons, & Co.
France, 98 J. Harrison
Canada, 40 Beck & Pollitzer
Germany, 100 L. & I. D. Jt. Co.
France, 33 Flageollet & Co.
Holland, 15 H. Johnson & Sons
Belgium, 29 Sawer, Sons, & Co.
,, 28 Société John Cockerill
Italy, 130 Sander & Knott
Holland, 26 Phillipps & Graves

ıfusorial Earth—
Belgium, 4 t. W. Harrison & Co.

ead Acetate—
Germany, 15 cks. F Boehm

ithopone—
Holland, 20 cks. D. Storer & Sons

langanese—
Germany, 12 t. C. S. Lovell

langanese Borate—
Germany, 20 cks. Petri Brs.

lanure—
E. Indies, 100 t. A. Hunter & Co.
Holland, 2 E. Olyett & Sons
Germany, 20 Gas Light & Coke Co.

lica—
E. Indies, £464 W. M. Smith & Sons
,, 160 E. Davis & Co.
U. States, 160 Knight & Morris

chre—
France, 80 cks. T. Cartwright
Holland, 3 pks. 6 cs. Phillipps & Graves
Belgium, 3 Société John Cockerill
Holland, 30 cks. T. & W. Farmiloe
Spain, 30 J. L. Lyon & Co.
France, 20 20 pks. ,,
,, 200 W. Harrison & Co.

itch—
N. Russia, 376 brls. Ragosine & Co.
Sweden, 50 Tegner, Price, & Co.

lumbago—
Italy, 115 cks. J. Thredder, Son, & Co
,, 20 bgs. Brit. Anti-Fouling Co.

otash—
Canada, 50 c. S. Ward & Co.

otassium Bicarbonate—
Holland, 20 cks. A. & M. Zimmermann

otassium Carbonate—
France, 100 c. J. A. Reid
Germany, 84 A. J. Luke & Co.
Belgium, 40 A. & M. Zimmermann
Germany, 110 Anderson, Becker, & Co.
,, 130 M D. Co.

otassium Chloride—
Holland, 30 cks. H. Johnson & Sons

otassium Prussiate—
Belgium, 19 brls. Perkins & Homer

yrites—
Spain, 1,400 t. Naylor, Benzon, & Co.
,, 751 Anderson, Anderson, & Co.

Rosin—
U. States, 600 brls. F. & S. Chiesman & Co.

Rosin Oil—
Germany, 7 brls. H. Hunt

Saltpetre—
Germany, 91 cks. 26 pks. 140 kgs. P. Hecker & Co.
,, 23 J. Hall, junr., & Co
,, 20 Petri Brs.
E. Indies, 2,475 bgs. Lucas & Spencer's Wf.
Holland, 76 cks. Petri Brs.

Sodium—
Holland, 100 c. R. W. Greeff & Co.

Sodium Acetate—
France, 25 cks. 8 pks. J. Harrison

Sodium Bichromate—
Germany, 355 cks. Perkins & Homer

Starch—
Germany, 40 cs. Phillipps & Graves
France, 16 cks. White Brs.
Holland, 80 G. Rahn & Co.
,, 60 Phillipps & Graves
,, 195 E. & T. Pink
Belgium, 50 A B. Curtis & Co.
,, 358 Leach & Co.
,, 150 Taylor Brs.
Germany, 410 Seaward Brs.
Holland, 271 T. H. Lee
U. States, 100 bgs. Ohlenschlager Brs.
France, 335 cs. E. & T. Pink
,, 10 cks. Bennett S. S. Co.
Holland, 1,786 cs. Little & Johnston
,, 720 A. Starck
,, 175 Hernu, Peron, & Co.
U. States, 200 R. G. Hall & Co.
Belgium, 333 F. Claydon & Co.
,, 180 T. H. Lee

Stearine—
U. States, 10 cks. L. & I. D. Jt. Co.
Belgium, 4 Sawer, Sons, & Co.
,, 4 H. Hill & Sons
France, 100 bgs. Bennett S. S. Co.

Sulphur—
Italy, 15 t. Elkan & Co.
,, 200 Union L. Co.
,, 50 C. Tennant, Sons, & Co.
,, 80 G. Boor & Co.
,, 25 C. Christophersen
,, 100 Johnson & Hooper
,, 30 Killick, Martin & Co.

Tartaric Acid—
Holland, 30 pks. Kirkpatrick & Co.

Ultramarine—
Holland, 20 cks. Thames S. T. & L. Co., Ltd.
,, 4 cs. Phillipps & Graves
,, 4 cks. J. Barber & Co.
,, 16 pks. W. Harrison & Co.
Germany, 31 Steinhoff, Sons, & Co.
,, 24 cks. T. Hamilton

Varnish—
France, 5 pks. Mory & Co
Holland, 5 J. Barber & Co.

White Lead—
Belgium, 20 cks. Perkins & Homer
Germany, 49 D. Storer & Sons
Belgium, 24 ,,
,, 20 J. L. Lyon & Co.
Germany, 20 F. G. Clifford
Holland, 20 28 brls. Burrell & Co.
,, 39 W. Balchin

Wood Pulp—
Sweden. 800 pks. W. G. Taylor & Co.
Holland, 80 T. H. Lee
Sweden, 471 E. J. & W. Goldsmith
Holland, 270 Phillipps & Graves
Belgium, 1,144 E. J. & W. Goldsmith
Portugal, 750 Horne & Co.
Sweden, 40 W. E. Bott & Co.

Zinc Oxide—
Germany, 40 brls. M. Ashby, Ltd.
Holland, 50 ,,
,, 25 cks. J. Matton
U. States, 100 M. Ashby, Ltd.
Sydney, 877 bgs. J Greig
Germany, 50 cks. R. W. Greeff & Co.
,, 4 J. Barber & Co.
,, 2 H. Lambert
Holland, 1 J. L. Lyon & Co.

LIVERPOOL.

Week ending September 17th.

Acetic Acid—
Rotterdam, 34 bskts.

Albumen—
Alexandretta, 5 cs.
Marseilles, 5

Ammonia (Liquid)—
Hamburg, 1 cs.

Aniline Colours—
Paris, 6 cks.

Antimony—
Akassa, 1 kg. Royal Niger Co.
Leghorn, 40 cks.

Asbestos—
Quebec, 616 bgs.
Montreal 2
Genoa, 1 cs.
Para, 2 P. J. Foulker & Sons

Barytes—
Antwerp, 18 cks. 70 bgs.
Rotterdam. 13

Bone Ash—
B. Ayres, 410 bgs. W. B. Dickenson

Bone Meal—
Calcutta, 2,240 bgs.

Boracic Acid—
Leghorn, 70 cks.

Borax—
Mollendo, 800 bgs. A. & S. Henry & Co., Ld.
Iquique. 615

Castor Oil—
Calcutta, 500 cs.
Marseilles, 16 52 cks. 85 brls.

Chemicals (*otherwise unenumerated*)
Rotterdam, 5 cs.

Colours—
Rotterdam, 1 ck. 1 cs. 7 tubs

Copper Sulphate—
Rouen. 74 cks. R. J. Francis & Co.

Cottonseed Oil—
New York, 144 brls.

Cream of Tartar—
Barcelona, 5 cks. Sachse & Klemm
,, 20

Dyestuffs—
Annatto
Bordeaux, 25 cks.
Cochineal
Las Palmas, 14 bgs. Swanston & Co.
,, 3 J. Padgett & Co.
Gd. Canary, 18 bgs. G. Aminch & Co.
Divi Divi
Hamburg, 807 bgs.
Extracts
New York, 10 brls.
Fustic
Carthagena, 616 pcs. G. H. Muller & Co.
Myrabolams
Bombay, 3,020 bgs.
Shumac
Palermo, 550 bgs. T. B. Moore & Co.
,, 920

Farina—
Stettin, 6,450 bgs. Brown, Geveke & Co.
Fiume, 100

Glucose—
New York, 700 brls.
Boston, 50
Dunkirk, 200 cks.

Glue—
Rotterdam, 220 bgs.
Stettin, 59 bskts N. Johansen & Dahl
Rouen, 20 cks. Co-op. W'sale Society, Ld.
Antwerp, 2

Insecticides—
Trieste, 12 brls. C. H. Keet
,, 50

Limestone—
Antwerp, 1 crt. 1 cs. J. T. Fletcher & Co
,, 2

Mica—
Calcutta. 2 cs.

Mineral White—
Fiume, 100 bgs. A. Baumann & Co.
Genoa, 50

Minium—
Rotterdam, 31 cks.

Ochre—
Marseilles, 7 brls.
Rouen, 40 cks. Co.-op. W'sale Society, Ld.
,, 75 R. J. Francis & Co.

Oxalic Acid—
Rotterdam, 4 cks.

Paint—
Genoa, 25 cs. Allan Line

Paraffin Scale—
New York, 70 brls. Thompson & Bedford
Baltimore, 100

Phosphate Rock—
Port Royal, 2,700 t.

Pitch—
Boston, 26 brls.

Potash—
Dunkirk, 4 cks.

Potassium Chlorate—
Gothenburg, 74 kgs. 3 cs.

Pyrites—
Huelva, 3,481 t. Matheson & Co.

Rosin—
Boston, 1,200 brls.
Maranham, 3 cks. Gunston, Sons & Co.

Salt—
Hamburg, 423 cks. H. Tyrer & Co.

Saltpetre—
Calcutta, 663 bgs. Ralli Brs.
Hamburg, 7 brls.

Soap—
New York, 10 brls. Maclaran & Muir
Hamburg, 1 cs.
Rotterdam, 3
Bari, 74
Marseilles, 28 517 bxs. 6 bdls.
Boston, 8 W. Foggett
Leghorn, 50

Soapstone—
Bordeaux, 6 cs. 300 bgs. G. G. Blackwell, Sons & Co.

Stannous Chlorate—
Havre, 11 kgs. Cunard S S. Co., Ld.

Sodium Nitrate—
Iquique, 9,433 bgs.

Starch—
New York, 200 bgs.
Fiume, 77 C. T. Vander Veen
,, 200
Baltimore, 800
Boston, 1,000 sks.
Antwerp, 279 cs. J. T. Fletcher & Co.
,, 120
Rotterdam, 106

Stearine—
Baltimore, 25 brls. 50 tcs.
Antwerp, 13 bgs. J. T. Fletcher & Co.
,, 38

Sulphur—
Catania, 100 t. 50 brls. 140 bgs.

Tallow—
New York, 180 brls.
Boston, 300 tcs
N. Orleans, 1,048 Bigland, Sons & Co.
B. Ayres, 27 pps. Las Cabezas Estancia & Co., Ld.
,, 50 London & Braz. Bkg. Co.
Baltimore, 265 tcs.

Tartar—
Bari, 3 cks.
Oporto, 4 Sachse & Klemm

Tartaric Acid—
Bari, 26 brls.

Treacle—
Bordeaux, 4 bdl.
Copenhagen, 10 cks.

Ultramarine—
Hamburg, 4 cks.

Varnish—
Boston, 9 bxs. W. H. Staynes & Smith

Verdigris—
Rouen, 2 cks. R. J. Francis & Co.

Waste Salt—
Hamburg, 1,014 bgs.

White Lead—
Rotterdam, 39 cks.

Wood Pulp—
Oporto, 1,000 bls. Coruna Timber Co.
Gothenburg, 150 G. F. Green & Co.
Rotterdam, 191

Zinc Oxide—
New York, 100 brls.
Antwerp, 6

Zinc White—
Hamburg, 40 cks.

MANCHESTER.

Week ending September 19th.

Albumen—
Paris, 10 cs

Alumina Sulphate—
Rotterdam, 47 cks.

Ammonium Molybdate—
Hamburg, 1 cs.

Aniline Oil —
Rotterdam, 2 cks.

Antimony Salt—
Hamburg, 8 cks.

Barytes—
Antwerp, 50 bgs.
Rotterdam, 22 cks.

Bone Ash—
Santa Elena, 750 t. Vibert Le Maistre & Co

Boracic Acid—
Hamburg, 6 cks.

Caustic Soda—
Hamburg, 2 cs.

Chemicals *(otherwise undes.)*—
Treport, 24 cks. 15 cs. 25 bgs.

Colours—
Boulogne, 5 cks.
Paris, 10 2 cs.
Rotterdam, 93 38 18 bxs. 210 brls.

Cream of Tartar—
Rotterdam, 8 cks.

Creosote Salt—
Hamburg, 2 cks.

Dyestuffs—
Alizarine
Rotterdam. 2 cks
Logwood
Port Liberte, 600 t.
Madder
Rotterdam, 1 ck.

Farina—
Rotterdam, 335 bgs.

Glucose—
Rotterdam, 10 kgs.
Stettin, 1,000 bgs Stott, Coker, & Co.

Glue—
Rotterdam, 55 bgs.

Limestone—
Antwerp, 4 cs. J. T. Fletcher & Co.
" 1 crt.

Litharge—
Rotterdam, 26 cks.

Potash—
Treport, 61 cks.
Hamburg, 20 dms.

Potassium Chloride—
Hamburg, 40 dms.

Potassium Permanganate—
Hamburg, 2 cks.

Potassium Prussiate—
Rotterdam, 1 ck.

Potassium Sulphocyanide—
Hamburg, 1 ck.

Sodium Phosphate—
Rotterdam, 14 cks.

Starch—
Rotterdam, 170 bgs.
Hamburg, 20 cks.
Antwerp, 170 cs.

Tannic Acid—
Hamburg, 2 cks

Tartaric Acid—
Rotterdam, 2 cks.

Tin Perchloride—
Antwerp, 2 cks,

Ultramarine—
Hamburg, 4 cks.
Rotterdam, 1 2 crts.

Waste Salt—
Hamburg, 130 bgs. and a qty.

Wood Pulp—
Kallar, 1,800 bls.
Carlsham, 2,788

Zinc Oxide—
Rotterdam, 73 brls.

HULL.

Week ending September 19th.

Acetic Acid—
Rotterdam 10 blns. Hutchinson & Son

Acids—
Leghorn, 20 cks. Wilson, Sons, & Co., Ld.

Barytes—
Rotterdam, 23 cks. W. & C. L. Ringrose
Antwerp, 13 Bailey & Leetham
" 14 H. F. Pudsey
Bremen, 22
Rotterdam, 65 Hutchinson & Son
Antwerp, 33

Castor Oil—
Leghorn, 13 cs. Wilson, Sons, & Co., Ld.
Genoa, 74 "

Chemicals *(otherwise undescribed)*
Hamburg, 10 cks. Wilson, Sons, & Co., Ld.
Marseilles, 4 brls. "
Dunkirk, 34 pks. "

Cod Oil—
Bergen, 50 brls. Wilson, Sons, & Co., Ld.

Colours—
Antwerp, 5 cks. Bailey & Leetham
" 22 pks. 3 Wilson, Sons, & Co., Ld.
Rotterdam. 8 Hutchinson & Son
" 18 21 5 brls. W. & C. L. Ringrose
21 bxs.
Dunkirk, 9 Wilson, Sons, & Co., Ld.
Rotterdam, 2 "

Dyestuffs—
Alizarine
Rotterdam, 22 brls. W. & C. L Ringrose
3 cs.
Madder
Rotterdam, 16 pks. Wilson, Sons, & Co., Ld.
Valonia
Smyrna, 2 300 bgs. 467 t.

Farina—
Stettin, 288 bgs. Wilson, Sons, & Co , Ld.

Glucose—
New York, 350 brls. Wilson, Sons, & Co., Ld.
Stettin, 4 cks. "
Rotterdam, 50 bgs. Hutchinson & Son
New York, 649 brls.

Glue—
Antwerp, 7 cks.
Dunkirk, 71 Wilson, Sons, & Co., Ld.

Lime—
New York, 3,296 bgs. Wilson, Sons, & Co., Ld.

Linseed Oil—
New York, 25 brls.

Lithopone—
Amsterdam, 40 cks. Hutchinson & Son

Manure—
Stavanger, 525 bgs. Wilson, Sons, & Co., Ld.

Ochre—
Marseilles, 17 cks. Wilson, Sons, & Co., Ld.

Paint—
Hamburg, 1 cs. Bailey & Leetham

Paraffin Wax—
New York, 200 pks. Wilson, Sons, & Co., Ld.
75 brls.

Phosphorus—
New York, 20 cs. Wilson, Sons, & Co., Ld

Pitch—
Rotterdam, 115 cks Hutchinson & Son
Archangel, 350 brls.
Antwerp, 9 cks. Wilson, Sons, & Co., Ld

Potash—
Rotterdam, 20 cks. W. & C. L. Ringrose
Antwerp, 6 14 brls. Wilson, Sons, & Co., Ld.

Pumice Stone—
Leghorn, 3 cks. Wilson,
6 cs. Sons, & Co., Ld.
" 10

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.

Soap—
New York, 73 pks. Wilson, Sons, & Co , Ld.

Starch—
Ghent, 284 cs. Wilson, Sons, & Co., Ld.
Antwerp, 160 Bailey & Leetham
Bremen, 2,725 Veltmann & Co.

Stearine—
Antwerp, 63 bgs. Wilson, Sons, & Co., Ld.
New York, 16 hds. "

Sulphur—
Antwerp, 3 pks. Wilson, Sons & Co , Ld.

Tallow—
Dunkirk, 37 cks Wilson, Sons, & Co., Ld.
New York, 50 hds. "

Tar—
Uleaborg, 3 100 brls. J. M. Hamilton & Co.
Archangel, 954

Tar Oil—
Riga, 1 brl.

Tartaric Acid—
Rotterdam, 4 cks. Hutchinson & Son
" 4 W. & C. L. Ringrose

Treacle—
New York, 1,874 brls. Wilson, Sons, & Co., Ld.

Ultramarine—
Bremen, 10 cks.

Varnish—
Naples, 7 cs.
New York, 12 pks. 13 Wilson, Sons, & Co , Ld
1 A Sanderson & Co

White Lead—
Ghent, 2 cks. Wilson, Sons, & Co., Ld
Rotterdam, 10 Hutchinson & Son
Amsterdam, 37 "

Wood Pulp—
Copenhagen 400 bls. Wilson, Sons, & Co., Ld.
Christiania, 2,083 "
Bergen, 326 pks. "
Gotnenburg, 622 "
Bremen, 100 Veltmann & Co.
Helsingfors, 60 J. Good & Sons

Zinc Ashes—
Amsterdam, 35 cks. Hutchinson & Son

Zinc Oxide—
Rotterdam, 25 cks. W. & C. L. Ringrose
Antwerp, 5 Bailey & Leetham
Rotterdam, 35 Hutchinson & Son

Zinc White—
Rotterdam, 25 cks. Hutchinson & Son

GLASGOW.

Week ending September 24th.

Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son

Alum—
Hamburg, 168 cks.

Ammonium Nitrate—
Rotterdam, 36 cks. J. Rankine & Son

Aniline—
Rotterdam, 6 bxs. 4 brls. J. Rankine & Son

Aniline Colours—
Hamburg, 14 cs.

Arachide Oil—
Rotterdam, 2 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 405 bgs.

Barytes—
Rotterdam, 86 cks. J. Rankine & Son
" 22 pks.

Castor Oil—
Leghorn, 40 cs.

Chemicals *(otherwise undes.)*—
Rotterdam, 1 ck. J. Rankine & Son

Colours—
Rotterdam, 5 cks. 1 cs. J. Rankine & Son
Antwerp, 3 1
Rotterdam, 7 pks
Hamburg, 2 1

Cottonseed Oil—
New York, 50 brls.

Dyestuffs—
Alizarine
Rotterdam, 48 pks.
" 22 cks. 1 brl.
Extracts
Antwerp, 1 ck.
Logwood
Bowling, 580 t.
Belize, 437
Madder
Rotterdam, 2 cks.
Shumac
Palermo, 1,200 bgs.

Farina—
Dantzig, 100 bgs.

Glucose—
New York, 150 bbls.

Glue—
Rouen, 22 cks. 26 bls.
Rotterdam, 40 bgs.

Lead Acetate—
Hamburg, 23 cks.

Manganese Ore—
Vizagapatam, 100 t.

Potash—
Rotterdam, 53 cks.
Rouen, 9

Potassium Sulphate—
Rotterdam, 8 cks.

Pumice Stone—
Messina, 3 brls.

Rosin—
New York, 123 brls.

Saltpetre—
Hamburg, 20 bgs.

Soap—
Hamburg, 1 cs.

Starch—
Rotterdam, 16 crts.
Antwerp, 40 cs.
Baltimore, 200 sks.

Sulphur—
Catania, 34 cks. 100 bgs
" 103 1,490

Tartar—
Naples, 3 cks.

Waste Salt—
Hamburg, qty.

White Lead—
Rotterdam, 102 cks. 10 dz.

Wood Pulp—
Christiania, 16 cs. 3,137 bls

Zinc Oxide—
Rotterdam, 35 cks.
New York, 50 brls.

Zinc White—
Rotterdam, 50 cks.

TYNE.

Week ending September 19

Antimony Ore—
Antwerp 2,019 bgs.

Asbestos—
Hamburg, 10 bgs.

Barium Carbonate—
Rotterdam, 201 bgs.

Barytes—
Rotterdam, 98 cks.
Antwerp, 360 bgs.

Castor Oil—
Antwerp. 28 brls.

Chemicals *(otherwise undes.)*
Rotterdam, 2 cs.

Colours—
Rotterdam, 1 ck.
Antwerp, 1

Glue—
Antwerp, 2 cks.

Kieselguhr—
Stavanger, 208 bgs.

one—
rp, 8 cs. Tyne S. S. Co.
ate—
k, 220 t. Langdale's Chemical M. Co.
s—
, 1,633 t. Scott Bros.
—
lam. 58 cs. Tyne S. S. Co.
ic Acid—
lam, 6 cks. Tyne S. S. Co.
Pulp—
rand, 1,000 bls.
l, 60
burg, 380

GOOLE.

ending September 16th.

Acid—
lam, 2 cs.

Alizarine—
Rotterdam, 110 cks. 2 cs.
Alkali—
Calais, 4 cks.
Aniline—
Rotterdam, 230 cks. 327 cs.
Ghent, 2
Hamburg, 20 1
Antimony—
Boulogne, 3 cks.
Barytes—
Rotterdam, 110 bgs.
Caoutchouc—
Boulogne, 6 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 22 cks. 7 cs.
Boulogne, 1
Dyestuffs *(otherwise undescribed)*
Boulogne, 10 cks. 4 cs.
Farina—
Delfszyhl, 1,583 bgs.
Hamburg, 300

Madder—
Rotterdam, 3 cks.
Potash—
Calais, 23 dms.
Hamburg, 20
Antwerp, 2 cks.
Saltpetre—
Rotterdam, 200 bgs.
Soda—
Rotterdam, 2 cks.
Starch—
Ghent, 104 cs.
Ultramarine—
Hamburg, 10 cks.
Waste Salt—
Hamburg, 200 t. 610 bgs.

GRIMSBY.

Week ending September 19th.

Albumen—
Antwerp, 2 cs.

Barytes—
Antwerp, 134 bgs.
Caoutchouc—
Hamburg, 1 cs.
Rotterdam, 1
Chemicals *(otherwise undescribed)*
Rotterdam, 54 pks.
Colours—
Rotterdam, 15 cks.
Hamburg, 19 24 cs. 8 pks.
Antwerp, 9 54
Dyes—
Antwerp, 25 pks
Hamburg, 1 cs. 57
Farina—
Hamburg, 300 bgs.
Indigo—
Rotterdam, 4 pks.
Wood Pulp—
Malmo, 120 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

ending September 23rd.

gasta, 45 cs. £67
—
al, 1 t. 1 c £102
3 13
ium Carbonate—
de, 1 t. 1 c £40
ork, 40 pks. 208
15 20
ium Chloride—
d, 1 t. £68
burg, 1 10 c. 53
ium Sulphate—
n, 32 t 10 c. £256
ara, 20 6 161
e—
bee, 1 t. 2 c £20
de, 2 49
a Nitrate—
1 t. £18
ing Powder—
don, 2 t. 19 c. £31
—
de, 2 t. £38
ne. 3 53
e Soda—
gton, 5 t. £37
ton, 4 10 c. 33
ara, 11 5
y, 10 11
Bay, 2 18
12
izabeth, 1 6 30
t, 5 19 47
cals *(otherwise undescribed)*
), 13 cks. £31
gen, 4 c. 11
dam, 1 t. 9 16
y, 5 2 10 14 cs.
rts. 297
ara, 9 13 36
ide, 100 kgs. 31
urg. 7 9 232
Acid—
tersburg, 15 c. 6 cks. £284
urg, 3 brls. 1 t. 10 7
gs. 605
ds, 5 5 kgs. 62
ton, 3 19
holm, 8 52
hagen, 5 32
tania, 10 66
a, 10 63
y, 2 14
ide, 5 32
n, 1 ck. 38
ita. 2 14
real, 1 16
astle, 2 cs 14
, 25 146
Products—
tarine
n, 25 cks. £326
iline Oil
, 4 cks. £100

Aniline Oil and Salts
Rotterdam, 5 cks. 19 drs. £580
Anthracene
Rotterdam, 62 cks. £285
Cologne, 30 125
Benzol
Rotterdam, 44 cks. 25 drs. £1,025
Hamburg, 9 puns. 220
Carbolic Acid
Antwerp, 12 pks. £18
Rotterdam, 30 cks. 176
Colombo, 9 cs. 27
Creosote Oil
Hamburg, 75 brls. £55
Creosote Salts
Philadelphia, 470 bgs. £74
Cologne, 1,465 157
Naphthaline
Rotterdam, 100 bgs £55
Paraffin Wax
Stettin, 25 brls. £26
Pitch
Antwerp 250 t. £400
Helsingfors, 200 1,000 brls. 890
Boston, 100 60
Terneuzen, 2 0 444
New York, 900 cks. 512 bgs. 613
Alexandria, 550 184
Hochfeldt, 415 t. 839
Sydney, 20 12
Pitch and Tar
Newcastle, 10 brls. 10 rnlts. £23
Prussian Blue
Amsterdam, 5 cks. 1 kg. £20
Pyridine
Amsterdam, 12 cks. £124
Stettin, 12 130
Pyridine Bases
Stettin, 1 dm. £38
Tar
Algoa Bay, 100 drs. £11
Adelaide, 100 18
Hamburg, 3 cks. 10
Tar Dyes
Boston 9 cs. £91
Tar Oil
Hamburg, 175 brls. £125
Gothenburg, 225 cks. 210
Toluol
Rotterdam, 72 cks. £452

Coal Products *(otherwise undes)*—
Melbourne, 50 brls. £46

Copper Sulphate—
Melbourne, 3 t. £45

Cream of Tartar—
Lyttelton, 8 c. £27
Sydney, 2 t. 178
Fremantle, 9 47
Adelaide, 5 18 536
Melbourne, 1 5 110

Disinfectants—
Melbourne, 121 pks. £100
Hamburg, 25 cks 125

Magnesia—
Sydney, 10 cs. £22

Manure—
Madeira, 5 t. £55
Singapore, 18 4 c. 144
Bordeaux, 30 75

Phosphate—
Stettin, 500 t. £1,300
Phosphorus—
Wellington, 4 cs. £42
Adelaide, 6 61
Potashes—
Sydney, 1 t. £17
Wellington, 1 18 c 80
Potassium Carbonate—
Wellington, 11 c. £11
Potassium Cyanide—
Algoa Bay. 50 cs. £513
Potassium Prussiate—
Antwerp, 1 ck. £28
Quebec, 5 65
Lisbon, 9 c. 27
Yokohama, 10 33
Potassium Sulphate—
Surinam, 19 t. 14 c. £198
Salt Cake—
Bremen, 150 t. £195
Antwerp, 132 231
Ghent, 295 295
Saltpetre—
Ontario, 12 t. 17 c. £254
Sheep Dip—
Wellington, 480 cs. £1,200
Pt. Elizabeth, 6 c. 10
Gisborne, 49 123
Melbourne, 25 drs 24
B. Ayres, 2,025 600 bgs. 6,445
Brisbane, 100 95
Soda Alkali—
Rotterdam 4 t. 17 c. £29
Soda Ash—
Lyttelton, 5 t. £24
Hobart, 6 1 c. 30
Soda Crystals—
Natal, 1 t. £2
Adelaide, 5 4 c. 12
Sodium Carbonate—
Fremantle, 1 t. £13
Sodium Hyposulphite—
Boston, 10 t 16 c. £55
Sodium Prussiate—
Genoa, 6 c. £12
Sodium Tartrate—
Toronto, 11 t. 2 c £37
Strontium Nitrate—
New York, 75 kgs. 5 brls. £120
Boston, 3 t. 6 c. 78
Sulphur—
Demerara, 10 cks. £9
Lisbon, 200 brls 139
Sulphuric Acid—
Demerara, 40 carboys £35
Penang, 5 t. 23
Christchurch, 2 10 c. 22
Superphosphates—
Calicut, 10 t. £39
Tartaric Acid—
Toronto, 11 t. 1 c. £63
Lyttelton, 5 31
Sydney, 1 123
Adelaide, 3 15 467
Melbourne, 1 5 40 kgs. 404
Madras, 4 30

LIVERPOOL.

Week ending September 23rd.

Acetic Acid—
Lisbon, 18 c. 3 q. £10
Alum—
Constantinople, 2 t. 15 c. £14
Beyrout, 3 10 17
Ancona, 3 15
Ammonium Carbonate—
Calcutta, 10 c. 3 q. £14
Montreal, 10 1 14
Genoa, 1 t. 5 35
Paris, 2 4 63
Stettin, 7 10
Konigsberg, 10 14
Marseilles, 1 28
Sydney, 1 1 30
Hamburg, 2 15 79
Ammonium Chloride—
Rio de Janeiro, 17 c. £28
Salonica, 1 t. 2 30
Trieste, 1 19 1 q. 69
Syra, 10 18
Piræus, 16 28
Alexandria, 4 142
Smyrna, 1 35
Ammonium Sulphate—
Rouen, 10 t. 8 c. 3 q. £75
Gd. Canary, 22 14 175
Lisbon, 10 13 86
Honolulu, 75 2 2 596
Genoa, 25 3 2 190
Las Palmas, 104 812
Barium Chlorate—
Vigo, 3 c. £13
Bleaching Powder—
Alexandria, 3 cks.
Baltimore, 193
Boston, 133
Cape Town, 42 bxs.
Montreal, 21 5 brls.
Newport News, 188
New York, 353
Paris, 15 17 cs.
Philadelphia, 31
Rotterdam, 18
Rouen, 65
Boracic Acid—
Antwerp, 15 c. £22
Melbourne, 2 t. 10 75
Bremen, 1 1 31
Montreal, 1 12 3 q. 49
New York, 1 2 32
Borax—
Genoa, 20 kgs. } £98
Venice, 20 cs. }
Leghorn, 20 }
Barcelona, 4 t. 5 c. 1 q. 85
B. Ayres, 1 19 39
Alexandria, 10 10
Antwerp, 38 10 705
Montreal, 6 1 3 134
Copenhagen, 5 2 52
Stettin, 6 5 113
Shanghai, 1 3 1

Teneriffe,		2		3
Hamburg,	12	8	2	215
Rotterdam,	15	7		284
Trieste,		10	3	11
E. London,	2			40
Toronto,	1	16		31

Calcium Chloride—

Sydney,	2 t.		£5
Boston,	29	3 c.	60
New York,	15	3	31

Carbolic Acid—

Rotterdam,	10 t.	2 c.	£604

Caustic Potash—

Baltimore,	5 t.	10 c.	£156
New York,	3	11	90

Caustic Soda—

Algoa Bay,		20 cs	
Amsterdam,	83 dms.		
Ascension,	30		
Bahia,	150		
Baltimore,	25	75 bxs.	
Barcelona,	296	60 pks.	
Batavia,	10		
B. Ayres,	75	90 kgs.	
Callao,	120		
Cape Town,		20 bxs.	
Fairwater,	140		
Galatz,	10		
Genoa,	729		
Hamburg,	134		
Havana,	100		
Havre,	20		
Lisbon,	46		
Madras,	50		
Manila,	35		
Maracaibo,	60		
Marseilles,	10		
Montreal,	75		
N. Orleans,	50		
Newport News,	125		
New York,	150		
Pernambuco,	70		
Philadelphia,	175		
Portland, Or.,	60		
Rio de Janeiro,	130		
Rotterdam,	35		
St. John's, N.B.,	35		
San Francisco,	238		
Singapore,	25		
Stockholm,	38		
Sydney,	18	14 bxs	
Tampico,	6		
Tarragona,	30	60 cks	75 pks.
Valencia,	37		
Victoria,	7		
Vigo,	10 brls.		

Chemicals *(otherwise undescribed)*

Antwerp,	1 t.	5 c.		£44
Genoa,	1			35
Hong Kong	2	16		97
Alexandria,	2			70
Odessa,	4	10		140
Calcutta,	7	10		289
Maranham,		1	1 q.	77
New York,	8	10		370
Boston,	37	6	2	195
M. Video,	1			37

China Clay—

Barcelona,	20 cks.		
Montreal,	200		
Pernambuco,	80		
Philadelphia,		200 crts.	
Rio de Janeiro,	70		

Coal Products—

Aniline Colours

Shanghai,	50 cs.		

Aniline Oil

Boston,	5 dms.		
Gothenburg,	2		

Aniline Salts

Boston,	20 cs.		
Genoa,		12 cks.	
Philadelphia,	20		
St. Nazaire,		20	

Anthracene

Rotterdam,	100 brls.		

Creosote Oil

Bordeaux,	50 brls.		

Naphthaline

Antwerp,	300 bgs.		

Pitch

Levis,	20 kgs.		
Rouen,	3 cks.		

Tar

Galatz,	50 brls.		
Honolulu,	25	50 dms.	
Lome,	2 t.		

Tar Oil

Pernambuco,	5 brls.		

Copper Hypocyanide—

Lisbon,		5 c.	£12

Copper Sulphate—

M. Video,	4 t.	10 c.		£36
Paris,	4	18	1 q.	75
Alexandretta,		10		8
Marseilles,	5	1	1	82
Ibrail,	2			36
Tampico,	29	2	3	495
Catania,	17	14		296
Vigo,	1		2	17

Copperas—

M. Video.	4 t.			£6
Portland O.,	6	14 c.	1 q.	17

Cream of Tartar—

Tampico,		2 c.	1 q.	£11

Disinfectants—

Gibraltar,		4 c	£9
Brisbane,	1 cs.		8
New York,	2	7	1 q. 33
Calcutta,	1	4	8

Gelatine—

New York,	100 bxs.		

Guano—

Barcelona,	68 t.	17 c	£672

Iron Oxide—

Gijon,	3 t.	7 c.	£18

Lime—

Opobo,	4 t.	3 c.	1 q.	£11

Manure—

Catania,	2 t.			£5
Valencia,	50	11 c.		110
Havre,	150	1		410
Bordeaux.	358	16	2 q	1,160
Rochefort,	525	2	1	1,303
Rouen,	40			230

Paint—

Cartagena, S A.,		10 cs.	
Cienfuegos,	1 ck.		
Colon,	2	13 kgs.	
Egwanga,	4		
Gibraltar,	17		
Halifax,	10		
Hamburg, 200 bgs.		1	
Honolulu,	11	10	
Hong Kong,		36 dms.	
Humacao,	4		
Lagos,	1	90	
Leghorn, 2 bxs.	4 crts.	4 cs.	
Madeira,		1	
Mayaquez,	10 brls.		
Monrovia,	1 ck.		
New York,		2	
Pernambuco,	10		
Ponce,	41		
Rosario.			
St. John's, N'fld.,	75		
San Juan,	150		
Sierra Leone,	104		
Tampico,		41	

Painters' Colours—

Acajutla.	10 cks.			
Alexandria,			2 cs.	
Axim,		23 kgs.		
Bahia, 12 brls.	6	22		
Baltimore,	110			
Bilbao,	8			
Bombay,		1,431	10	
B. Ayres,	5			
Montreal,	15			
Para,		21		
Philadelphia,	2			
Porto Alegre,		55		
Tampico,			5 brls	
Yokohama,	14		27	

Picric Acid –

New York,	1 t.	1 c.	2 q.	£105

Potassium Bichromate –

Rio de Janeiro,	2 t.	9 c.		£100

Potassium Chlorate—

Lisbon,		3 c.	£7
Libau,	3 t.		194
Hiogo,	25		944
Boston,	2	10	97
New York,	15		580

Potassium Cyanide—

Cartagena, N.G.,		10 c.	£64
Savanilla,		10	64

Potassium Prussiate—

Antwerp,		5 c.	£16
Genoa,	2 t.	10	154

Salt –

Adelaide,	10 t.			
Amsterdam,	110			
Antwerp,	415			
Baltimore,	600			
Barbadoes,	50			
Boston,	305			
Brunswick,	600			
B. Ayres	25			
Calcutta,	2,681			
C. C. Castle,			25 cs.	
Christiania,	307			
E. London,	36	11 c.		
Egwanga,	40	4		
Forcados,	425			
Ghent,	270			
Halifax,	100			
Hamburg,	115	4		
Iceland,	210			
Lagos,	78	17		
Loango,			1	
Melbourne,	95			
Montreal,	400			
N. Orleans,	500			
Newport News,	65			
New York,	94			
Old Calabar,	40	3	1,000 bgs.	
Para,	17	17		
Pensacola,	600			
Portland, Or.,	125			
Pt. Royal,	2,450			
Rangoon,	50			
Rio de Janeiro,		19	50 cs.	
Rio Grande,		12		
Rotterdam,	239			
Wellington,	18			
Winnebah,	10			

Salt Cake—

San Francisco,	46 t.	18 c.		£90
Baltimore,	45	4		80

Saltpetre—

Cartagena, N.G.,	2 t.	18 c.		£70
Portland, Or.,	3		3 q	65
Barcelona,	3	15		79
Pernambuco,	2	10		58
Tampico,	1	2		28

Sheep Dip –

New York,			3 q.	£6
B. Ayres,	17 t.	17 c.		500
Dunedin, N.Z.,	8	9		188
Wellington, N.Z.,	2	16		63

Soap –

Accra,		150 cs.	
Alexandria,		45	
Algoa Bay,	500 bxs.		
Amsterdam,	50	635	
Antigua,	80		
Antwerp.	15	1,000	
Appam,		50	
Assinee,		25	
Athens,		11	
Axim,		200	
Baltimore,	55		
Belize,		2	
Bombay,	710	13	
Brisbane,	6		
B. Ayres,		49	
Calcutta,		500 bdls.	17
Cape Town,	1,132	382	
Cape Coast,	100		
E. London	50		
Ferrol,		1	
Funchal,		5	
Gibraltar,	50	261	
Hamburg,	230	12 dms.	
Havre,	500	130 cs.	
Iquitos,	200		
Kingston,		840	
Lagos,		300	
Macassar,	100		
Malta,	20	5	
Manaos	325		
Mauritius,	1,136		
Melbourne,		500	
Montreal,		19	
N. Orleans,	300		
New York,	950	830	
Para,	300	2	
Philadelphia,		500	
Pt. Elizabeth,		4	
Pt. Natal,		18	
Rangoon,		11	
Rotterdam,	687		
St. John's, N'fd.,		682	
Salonica,	80		
San Juan,	80		
Sapeli,	400		
Sierra Leone,	90	309	
Singapore,	3,403		
Sydney,		5	
Trinidad,	400	50	
Warri,	250		
Winnebah,		100	

Soda Alkali –

Leghorn,	105 brls.		
Smyrna.	50		
Sydney,	50	112 bgs.	

Soda Ash—

Antwerp,		240 bgs.	
Baltimore,	16 cks.	1,368	
Beyrout		15 brls.	
Boston,	37	13 tcs. 1,320	
B. Ayres,	200		
Copenhagen,		100	
Dunedin,	2		
Genoa,	5		
Ghent,	2		
Hamburg,	49		
Havana,	2		
Libau,		870	
Montreal,		420	
New York,	83	702	
Philadelphia,	13	91	1,200
Piræus,		50 brls.	
Rio de Janeiro,	45		
Rotterdam,			30
St. Petersburg,	132		
Smyrna,		280 kgs.	
Sydney,	343		
Wellington,	11		
Yokohama,	486		

Soda Crystals—

Boston,		136 brls.	250 b
B. Ayres,	500 cks.		
Malta,	50	40 kgs.	
M. Video,			200
Montreal.		430	
New York,			120
Philadelphia,	140	324	
Quebec,		125	
Victoria,		23 brls.	
Varna,		12	

Sodium (Metal)—

Rotterdam,			350

Sodium Bicarbonate—

Amsterdam,		90 kgs.	
Baltimore,	16 cks.	460	
Bordeaux,		10	
Braila,		53	
B. Ayres,		67	
Calcutta,		23	
Callao,	10		
Campano,		20	
Copenhagen,	21	125	
Genoa,		900	
Halifax,		123	
Havana,		90	3
Kingston,			30
Malaga,		20	
Malta,		14	
M. Video,		43	
Montreal,		437	
Newport News,	150 cks.		
Oporto,			18
Paris,	4	60	
Quebec,		260	
Rio de Janeiro,		90	
Rouen,			12
San Sebastian,			1 60
Stettin,		30	
Sydney,		359	
Venice,		100	
Wellington,		100	
Yokohama,		1,000	

Sodium Hyposulphate—

Naples,		10 brls.	

Sodium Silicate—

Alicante,	92 cks.		
Boston,	13		
Hamburg,	50		
Malta,	15		
Montreal,	25		
Sydney,	23		
Syra,	15		
Tripoli,	18		
Valencia,	48		
Zante,	20		

Starch—

Ferrol,	10 bxs.		

Sulphur—

Boston,	125 t.	2 c.		£
Trinidad.	28	4		
Montreal,	141	16	2 q	

Superphosphates—

Nantes,	227 t.	13 c.	£
Bilbao,	98	10	

Varnish—

Constantinople,		8 cs.	
Montreal,	1 ck.		
Porto Alegre,		1	
Rosario,		3	

White Lead—

Colon,	50 kgs.		

Zinc Chloride—

Bombay,	8 t.	10 c.	£

MANCHESTER

Week ending September 23rd.

Alum—

Gabes,	5 brls.		
Mersyne,	75		
Tunis,	2		
Alexandretta	25		

Ammonium Carbonate—

Hamburg,	10 kgs.		

Aniline Colours—

Rotterdam,	6 kgs.	2 cs.	

Aniline Oil—

Antwerp,	6 dms.		

Anthracene—

Antwerp,	1 ck.		

Carbolic Acid—

Rotterdam,	25 cks.		
Treport,	5		139 brls

Caustic Potash—
Treport, 30 dms.
Caustic Soda—
Beyrout, 10 dms.
Jaffa, 40
Chemicals *(otherwise undescribed)*
Alexandria, 14 cks.
Copperas—
Alexandretta, 70 brls.
Mussowah, 15
Mersyne, 75
Cottonseed Oil—
Tunis, 2 brls.
Creosote Oil—
Gabes, 460 cks.
Creosote Salts—
Treport, 58 bgs.
Glue—
Bombay, 2 cks.
Oxygen—
Treport, 100 tubes
Painters' Colours—
Bombay, 4 cks.
Pitch—
Antwerp, 1,721 c.
Potassium Carbonate—
Rio de Janeiro, 6 brls.
Pyridine—
Rotterdam, 12 cks.
Soap—
Hamburg, 2 cks.
Malta, 10 bxs.
Soda—
Rotterdam, 5 cks.
Sodo Ash—
Beyrout, 10 brls.
Soda Crystals—
Malta, 2 cks.
Sodium Bicarbonate
Treport, 20 kgs.
Tar—
Treport, 32 cks.
Tar Oil—
Treport, 102 cks.
Toluol—
Rotterdam, 50 brls.
Varnish—
Barcelona, 6 cks.

HULL.

Week ending September 19th.

Alkali—
Bremen, 3 cks.
Ammonium Sulphate—
Stettin, 500 bgs.
Benzol—
Rotterdam, 24 cks. 12 dms.
Bleaching Powder—
Stettin, 19 cks.
Danzig, 95
Caustic Soda—
Danzig, 8 dms.
Chemicals *(otherwise undescribed)*
Amsterdam, 5 pks.
Bremen, 1 ck. 27
Bergen, 3 12
Christiania, 1 10
2,325 slbs.
Danzig, 24
Gothenburg, 5 27 cs. 16
Hamburg, 123 10
Konigsberg, 5
Rouen, 20
Rotterdam, 60
Stockholm, 4
St. Petersburg, 17
Cottonseed Oil—
Antwerp, 1,042 c.
Amsterdam, 877
Bremen, 35
Christiania, 18
Danzig, 220
Gothenburg, 292
Hamburg, 557
Konigsberg, 50
Rotterdam, 621
Stavanger, 34
Stockholm, 99
Stettin, 316
Dyestuffs *(otherwise undes.)—*
Christiania, 54 bgs.
Rotterdam, 1 ck. 5 cs.
St. Petersburg, 6
Linseed Oil—
Antwerp, 214 c.
Amsterdam, 52
Bremen, 101
Bergen, 44
Christiansand, 53
Christiania, 642
Christiansund, 35
Copenhagen, 35
Drontheim, 117
Hamburg, 65
Rotterdam, 100
Stavanger, 52
Stockholm, 103
Manure—
Danzig, 401 t.
Stettin, 172
Ochre—
Amsterdam, 4 cs.
Painters' Colours—
Antwerp, 50 pks.
Bremen, 3 cs.
Christiansund, 80
Copenhagen, 3 cks. 1 dm.
Danzig, 14 4 15
Drontheim, 1 1 146
Gothenburg, 2 1
Ghent, 19 2
Hamburg, 5
New York, 103
Rouen, 7
Rotterdam, 1
Stavanger, 1
Pitch—
Antwerp, 356 t.
New York, 205 cks.
Soap—
Christiania, 7 cs.
Gothenburg, 2
Stettin, 1
Starch—
Copenhagen, 150 cs.
Tallow—
Harlingen, 25 cks.
Rotterdam, 9
Gothenburg, 30
Stockholm, 3
Tar—
Amsterdam, 6 cks.
Hamburg, 10
Turpentine—
Drontheim, 2 cks.
Varnish—
Antwerp, 3 cs.
Hamburg, 10 cks. 1
Stockholm, 1 2
Stettin, 3
Whiting—
Hamburg, 20 bgs.

GLASGOW.

Week ending September 24th.

Ammonia (Liquid)—
B. Ayres, £47
Ammonium Sulphate—
Hamburg, 50 t. 15 c.
Nantes, 44 14¾
Rouen, 50 12½
Rotterdam, 50 10
Bleaching Powder—
Valparaiso, £138
Calcutta, 600
Borax—
Danzig, 9 cks.
Caoutchouc—
Huelva, £56
Caustic Soda—
Calcutta, 36 t.
Coal Products—
Creosote Oil
Danzig, 50 brls.
Christiania, 30
Pitch
Baltimore, £55
Canada, 140
Gothenburg, 180
U.S.A., 235
Tar
Calcutta, £30
Danzig, 1,549 brls.
Riga, 101
U.S.A., 105
Tar Acids
U.S.A., £30
Extracts—
Canada. £470. 12s.
Malauney, £67
New York, 169
U.S.A., 96
Linseed Oil—
B. Ayres, 3 t. 17¼ c
Canada, 22 15½
Huelva, £20
Logwood—
Montreal, £33
Canada, 86
Manganese—
Bale, 11 t. 7¾ c.
Manure—
Rouen, 10 t.
Paint—
Calcutta, £70
Rosario, £40. 12s.
Yokohama, £30
Painters' Colours—
B. Ayres, £207
Huelva, 54
Paraffin Wax—
Danzig, 20 brls. 4 bgs.
Bordeaux, £80
Lisbon, 30
Paris, 60
Arendal, 11
Christiania, 28
Potash—
Danzig, 10 t. 15 c.
Potash Salts—
Mexico City, £350
Potassium Bichromate—
Antwerp, £65
Rouen 310
Salt—
Valparaiso, 2 t. 2¾ c.
Sheep Dip—
B. Ayres, £207
Soap—
Puerto Cortes, 2 t. 16 c.
Sodium Bichromate—
Antwerp, 3 t. 10¾ c.
Canada, 8 3½
Laval, 5 13¾
Rouen, 34 15¾
Starch—
Rotterdam, 2 t.
Tallow—
Lisbon, £181
Treacle—
Gothenburg, 20 t. 3¾ c.
Christiania, 20
Ultramarine—
U.S.A., £30
Varnish—
Singapore, £29
White Lead—
Jamaica, £52

TYNE.

Week ending September 19th.

Alkali—
Bergen, 5 t. 8 c.
St. Petersburg, 39 14
Rotterdam, 2 3
Amsterdam, 26 6
Christiania, 2 8
Alum Cake—
Gothenburg, 1 t.
Ammonium Carbonate—
Seville, 6 c.
Antimony—
Antwerp, 5 t.
Hamburg, 10
St. Petersburg, 10
Rotterdam, 2
Copenhagen, 5
Barium—
Rotterdam, 1 t. 3 c.
Barium Carbonate—
Hamburg. 153 t. 7 c.
St. Petersburg, 20 11
Stockholm, 1 5
Bleaching Powder—
Christiania, 60 t. 1 c.
Hamburg, 31 1
St. Petersburg, 75 16
Rotterdam, 28 13
Odense, 10 2
Aarhuus, 2 18
Gothenburg, 5 5
Amsterdam, 3 17
Lisbon, 15 2
Borax—
Aarhuus, 1 t. 4 c.
Carbonic Acid Gas—
Bergen, 2 q.
Castor Oil—
Gothenburg, 17 c.
Caustic Soda—
Antwerp, 3 t.
Hamburg, 10 5 c.
Galatz, 211 9
Copenhagen, 3 3
Seville, 62 18
Stockholm, 8 14
Christiania, 9 9
Hydrate Alumina—
Antwerp, 5 t. 6 c.
Litharge—
Antwerp, 5 t. 5 c.
Hamburg, 2 13
Stockholm, 2 17
Magnesia—
Hamburg, 2 c.
Gothenburg, 3
Leghorn, 17
Paint—
Bergen, 5 c.
Plumbago—
Aarhuus, 3 c.
Soap—
Bergen, 7 c.
Copenhagen, 1
Soda—
Bergen, 5 t. 18 c.
Rotterdam, 10
Leghorn, 10 2
Christiania, 22 9
Drontheim, 5
Stockholm, 44 17
Amsterdam, 10
Soda Ash—
Hamburg, 5 t. 9 c.
Rotterdam, 15
Gothenburg, 5 10
Stockholm, 100 2
Sodium Hyposulphate—
Odense, 1 t. 3 c.
Sodium Silicate—
Antwerp, 18 c.
Sulphur—
Antwerp, 10 t.
Christiania, 50
Drontheim, 200
Gefle, 50
Superphosphates—
La Rochelle, 1,000 t.
Helsingborg. 247 18 c.
Frederikshavn, 15

GOOLE.

Week ending September 16th.

Benzol—
Boulogne, 24 cks.
Rotterdam, 169
Chemicals *(otherwise undescribed)*
Amsterdam, 12 cks.
Coal Products *(otherwise undes.)—*
Antwerp, 2 cks. 2 cs.
Boulogne, 32 1
Rotterdam, 11 4 dms.
Rotterdam, 74
Colours—
Boulogne, 1 ck. 1 cs.
Ghent, 2
Harlingen, 2
Dyestuffs *(otherwise undescribed)*
Ghent, 1 ck.
Hamburg, 3
Rotterdam, 4 1 cs.
Manure—
Dunkirk, 520 bgs.
Ghent, 97

GRIMSBY.

Week ending September 19th.

Alkali—
Hamburg, 23 cs.
Rotterdam, 8
Chemicals *(otherwise undescribed)*
Antwerp, 12 btls.
Rotterdam, 28 dms.
Hamburg, 20 2 cs. 29
Coal Products *(otherwise undes.)—*
Antwerp, 1 ck.
Dieppe, 103
Colours—
Antwerp, 2 cks. 1 cs.
Dieppe, 10
Rotterdam, 6

PRICES CURRENT. WEDNESDAY, SEPTEMBER 30TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids :—			
Acetic, 25 %, and 40 % .. .. per cwt.	5/10½ & 8/9		
,, Glacial .. .. ,,	10/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80 Tw. .. .. per lb.	0	0	1⅜
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	5	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880 = 28° B .. .. per lb.	0	0	2¾
,, = 24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	12	6
,, ,, (grey) Hull .. .. ,,	7	10	0
Aniline Oil (pure) .. .. per lb.	0	0	10½
Aniline Salt ,, ... ,,	0	0	9½
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9¾
Benzol, 90 % .. .. per gallon	0	4	9
,, 50/90 ,, ... ,,	0	3	4½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	6½
,, (crude 60°) .. .. per gallon	0	1	9
Creosote (ordinary) .. .. ,,	0	0	1
,, (filtered for Lucigen light) .. .. .. ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	11	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. ,,	0	0	0
Copper .. .. per ton	47	15	0
,, Sulphate .. .. ,,	16	5	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	40	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	10	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. .. ,,	14	15	0
,, *Carbonate (white lead) pure* .. .. .. ,,	16	0	0
,, *Nitrate* .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	5	0
,, ,, (grey) (ex ship .. .. ,,	8	0	0
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
,, Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	8
Oils :—			
Cotton-seed .. .. per ton	16	0	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	6½
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	0
,, Chlorate .. .. per lb.	0	0	4½
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	10	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	6½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	6½
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. .. ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5¾
,, Borate (Borax) .. .. net, per ton.	18	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	5	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	5	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	10	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	10½
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	0	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	6	10	0
(Roll Brimstone) .. .. ,,	6	5	0
,, Brimstone : Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	5
,, English Ingots .. .. per ton	61	10	0
Zinc (Spelter) .. .. ,,	16	17	6
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

CHEMICAL TRADE JOURNAL

AND

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tisements intended for insertion in the current week's issue each the office by **Thursday morning** at the latest.

WANTED—A STANDARD OF PURITY.

NOW that the solution of their sewage disposal question has virtually been arrived at by the Manchester Corporation, it is not difficult to foresee that ere long the influence of the River Irwell upon the pollution of the Ship Canal will be rendered very conspicuous.

Practically the expenditure of a quarter of a million of money on a culvert to carry the Manchester sewage effluent into tidal waters, is directly necessitated by the unsatisfactory state of the Irwell, since the effluent *per se* is virtually satisfactory until it comes into contact with the Canal water, which at Davyhulme is really Irwell water. As soon as it does so the trouble begins, and the unpleasant effects of the resultant putrefaction make themselves felt for a long way down the Canal.

This being the case, it is but natural that manufacturers should be anxious to know how they stand with the Mersey and Irwell Joint Committee in regard to their share of the pollution.

To judge by the report on manufacturers' effluents presented to the committee on Monday, it is a heavy share, and the majority of manufacturers will begin to look about them to ascertain how much further they have to improve their treatment in order to ensure immunity from prosecution. Well! on the whole we are sorry to say that we are sorely tempted to advise them not to trouble at all, because there is practically no standard for them to go by, and, even if there were, there is no knowing that it would not be changed by the time they had conformed with it. The committee have some sort of semi-official standards by which they judge the quality of sewage effluents, but there is nothing to indicate whether or not these same standards are applied in adjudging the quality of manufacturers' effluents. The natural presumption is a negative one, since they were first inaugurated and employed about two years back for the specified purpose of comparing sewage effluents and sewage effluents alone.

It therefore becomes necessary to review the position of the manufacturer in regard to the possible extent of his responsibilities in the matter of waste water treatment.

Five years ago the committee were shaping their course on the advice that "no general numerical standards of purity of effluent can be maintained." In the next breath the same authority states that the best practicable means must be enforced, and "the inspector must decide whether the best practicable means have been employed." This is just what the Joint Committee will not let him do, as the cross-examination of those who have been called before the committee to explain why proceedings should not be taken against them plainly reveals. We are quite familiar with the stock arguments that are put forward in answer to this complaint, and it is very right and proper that the inspector

should not be allowed to degenerate into a consulting engineer to every polluter. But there is no need to go to such extremes in guarding against this contingency, as there is ample evidence to prove that an almost unbounded latitude in the matter of counsel has led to no complications with numbers of other inspectors whose duties are comparable.

The purification of trade effluents is a matter which is very slightly affected by the niceties of competitive manufacture. Nine times out of ten A is benefited by all the improvements B makes in his treatment, and as the inspector is practically the sole arbiter of what is the best practical means, it ought not only to be within his power, but his duty, to make generalised but helpful suggestions to C, who may be labouring under exceptional difficulties.

The Joint Committee, however, seem to set a hypercritical interpretation upon the word "best" as regards practicability. We are aware that, strictly speaking, "*best* practicable" conveys only one meaning, and is capable of but one interpretation—the superlative - than which there is no better. But we have always contended that in the spirit of their Act this word must only be appraised when illuminated by the qualifying effulgence of its neighbour, and it is on the "*practicable*" that the emphasis should fall.

Take the case of the present sewage effluent standards. Though we are not directly concerned with them at the moment, it may not be amiss to point out that taking albuminoid ammonia as the chief indicator of impurity, good effluents will have to be 30% purer than the Roch, in normal flow, at its confluence with the Irwell, or the Limey Water Brook at Rawtenstall; whereas we think that if every effluent could be made as good as the Limey Water, or even 30% worse, we should not know the Irwell for the same river in six months' time.

Yet, while the manufacturer has no such doubtful standards to contend with, he has worse to face. So far there is no finality, not even a will-o'-the-wisp standard.

In short, the exceedingly enviable position of manufacturers is this:—It rests with the inspector to decide when the "best practicable means" are being employed, but he must never express an opinion as to what is best, nor even what is desirable. If an expert is consulted, and what he advises adopted, the committee step in and say, "It is for us to decide what is a good effluent and what is not," and then they immediately retire once more behind the "best practicable means." In fact they are constantly seeking to enforce something which they cannot define. Like Euclid's point, this something has no parts and no magnitude, and, as with his line, has length—a lot of length—but no breadth.

And yet wonder is expressed at the slow progress that is being made, and the committee pose as semi-Ishmaelites, in that every man's hand is against them, though theirs are against no man! Exactly so. They are only directed dead against themselves.

Obituary.—The death is announced, at the age of 88, of Mrs. Darwin, widow of the late Charles Darwin, the illustrious naturalist. She died at Down, Kent, on Friday, October 2nd. Mrs. Darwin's maiden name was Emma Wedgwood, and she was the daughter of Darwin's uncle, Josiah Wedgwood, and the granddaughter of the founder of the Etruria works. She was married to Darwin on January 29th, 1839. After their marriage they lived at 12, Upper Gower-street, where they remained until 1842, when the move to Down was made. It was at Down that Darwin died on April 19th, 1882. The surviving children of the marriage include Mr. George Howard Darwin, F.R.S., Plumian Professor of Astronomy at Cambridge; Mr. Francis Darwin, F.R.S., University Reader in Botany at Cambridge; and Leonard *Darwin, late member for* the Lichfield Division of Staffordshire.

MANCHESTER CORPORATION SEWAGE SCHE

THE QUESTION OF COST.

THE City Surveyor has presented the following report to the Committee of the Corporation in reference to a resolution was adopted at the meeting of the City Council on the 9th ult. best point of outfall, says the Surveyor, and the best course for a fall conduit involved grave questions for consideration, and oc his close attention for several months. After a careful examina the tidal estuary of the Mersey, he fixed upon what he consider best point of discharge for the conduit. He then directed his at to the route to be followed by the conduit from the selected p outfall to the sewage works at Davyhulme. Several alternativ were surveyed and the character of the ground closely inves before the line ultimately selected was determined upon. A w this magnitude should, when constructed, be calculated to endur Surveyor therefore provided in his estimate for the best workm and materials. As some misconception appears to exist as to t of the conduit, the City Surveyor observes that a circular having an internal diameter of 6 ft. 6 in., and laid at the incl available, is capable of discharging more than the required qu viz., seventy million gallons per 24 hours. The Surveyor has every pains and precaution to adopt such prices and estimates as be ample. He has again examined his previous estimate, satisfied that at current prices the work can be executed for th already mentioned, viz., £258,000. In order, however, to have dependent check on his estimate, he has submitted his plan surveys to three well-known experts, namely, Mr. John Newto engineer, Cooper-street; Mr. John Bowden, civil engineer, Ridg and Mr. Charles Jackson, quantity surveyor, Brazennose-stree requested those gentlemen together to carefully consider the s and he has received their report, which is as follows:—"W examined the drawings in connection with the effluent co designed by Mr. Meade, and to be constructed between the e tanks of the Corporation at Davyhulme and the tidal waters river Mersey near Randall's Sluices, with all necessary wo connection therewith. We have ascertained the quantity of to be executed, and have priced the items, and added the percentage for contingencies. We have also considered the v of the easements and rights to be acquired for the purpo laying such conduit, and the incidental expenses connected with. In our judgment the work can be completed fo sum of two hundred and forty-nine thousand nine hundred seventy-eight pounds (£249,978.), exclusive of legal and Parliam expenses." The expenses which may be incurred in obtaining sta powers must, of course, depend upon circumstances which may after arise, and cannot be estimated with any degree of certainty engineer. The City Surveyor therefore desires to adhere to his or estimate, viz., £258,000.

THE PROGRESS OF THE SCHEME.

On Wednesday, at the meeting of the City Council, Mr. Alde Thompson moved the adoption of the minutes of the R Committee, and the report of the same committee in reference t cost of the effluent disposal scheme, and the desirableness of a Parliament to be allowed to construct a conduit from Davyhulm the Mersey for the purpose of sending the effluent from the se works of the Corporation to the tidal river. In doing this he ca to answer some of the objections which had been urged against scheme. With regard to the suggestion that an open channel s be construeted in lieu of the proposed course underground, he said cost would be quite as great, through having to pay for land and leaves, as making a channel underground.

Sir John Harwood moved the following as an amendment:—"T the proceedings and report of the Rivers Committee be appro subject to the following condition—namely, that with a view of enab members of the Council to be more fully acquainted with the sch for effluent disposal, it be clearly understood that the final sanctio the Council thereto be deferred for a period of three months, so th may be clearly ascertained whether any modifications therein ca made, or whether it may be practicable in any way to adopt an alte tive more beneficial to the community, and that in the meantime Town Clerk be authorised to give all notices and take all formal ceedings and steps which may be necessary for the promotion of proposed Bill, including the holding of any meetings required by Borough Funds Act." He was told, he said, it would be necessar include this matter in the Bill, which must be lodged in a few w hence; but that, he thought, might be done without committing Council to a final approval of this scheme. Considering the magn of the scheme, he maintained that the Council should have a fu time for considering it in all its bearings. It seemed to him that Council had not yet been fully informed as to the effect of the sch upon the Ship Canal. Would the Canal Company be unable to f their obligations to Warrington if the effluent were kept out of Canal? Was it not also desirable, before plunging into this sche

hey should endeavour to find some peaceable and reasonable for removing the objections of Warrington, or of showing them ere was no other way out of the difficulty? Sir John also took on to condemn the Committee for having as their chemical r Sir Henry Roscoe, while Sir Henry was at the same time the r of the Mersey and Irwell Rivers Joint Committee. Nothing, d, could be more undesirable or more calculated to create distrust hat the Coorporation should have as adviser a gentleman who dviser to the authority that was proceeding against them in this r. The dual position was inconsistent, and it had brought -he said it with all respect—into this position which was so unble. How could a man serve two masters in this way? It was r inconsistent with proper legislation. Sir John pointed to the ittee's proceedings in 1886, in regard to the main drainage e, and from the failure of that scheme to realise all the hopes of moters he drew an argument for the exercise of special care in t of the present project. It was painful to him, he added, to be tility to the Rivers Committee, and nothing but a strong sense of sponsibility would allow him to take up such an attitude.—After onged discussion the amendment was put and carried by 45 votes

The Patent List.

is list is compiled from Official sources in the Manchester ical Laboratory, under the immediate supervision of e E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

vements in the Manufacture of Magnesia and Calcium Carbonate. N. D'Andria. 20,818. September 21.

Calcium Chloride Solutions. Recovering Hydrochloric Acid, and aking Magnesium Sulphate, or Magnesia and Chlorine. M. N. Andria. 20,822. September 21.

cting and Recovering Metallic Copper. W. Noad and R. J. Lightfoot. 838. September 21.

vements in Vessels for Dyeing, etc. B. Lee. 20,846. September 21.

facturing and Recovering Cyanides, and Apparatus therefor. P. Lewis and R. A. Cripps. 20,883. September 21.

Traps. A. Bradshaw. 20,952. September 22.

nizing Apparatus. P. J. Davis. 20,959. September 22.

cting Silver from Refractory Sulphide Ores. A. J. C. Nettel. 012. September 22.

facture of Saccharine. W. L. Wise. 21,026. September 22.

olytic Apparatus. W. L. Wise. 21,027. September 22.

facture and Application of Terebenthene Mono Hydrochloride. G. McIntosh. 21,031. September 22.

ering Gold and Silver from Cyanide Solutions W. Douglas. 21,038. ptember 23.

facture of Soap. E. S. Wilson and E. Stewart. 21,048. September 23.

ing Sand and other Filtering Materials. A. P. Hope. 21,060. ptember 23.

g Iron to Beer. J. Kwiatkowski. 21,118. September 23.

osition for Galvanized and other Iron as an Anti-rust Foundation r Painting. C. Thomas. 21,138. September 24.

ning Tartaric Acid and Tartrates. A. Schmitz and E. C. W. Toenges 178. September 24.

ratus for the Manufacture of Sulphuric Acid. Brante, Etienne, & Co. 205. September 24.

vements in Sewage Tanks. The Magnetite Sewage and Water Purifition Co., Ltd., and G. H. Skelsey. 21,235. September 25.

g Soluble Colours, Pigments, etc., on Woven Fabrics. F. V. illiams. 21,244. September 25.

cial Stone. G. C. Levey and C. L. O'Brien. 21,313. Sebtember 25.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

ese abstracts are specially prepared for the Chemical Trade Journal, ALL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the .*

ovements in Process of Converting Ferric Oxide into Magnetic xide of Iron. R. H. Peak, Main-street, Orlando, Florida, U.S.A. Eng. at. 15,965. July 18, 1896.

e finely-ground ferric oxide is heated for some hours in an air- revolving furnace to a temperature a few degrees below the fusing of iron. The duration of the heating depends upon the fineness e oxide. The whole is then left to cool, all air being carefully ded. The resulting product is Fe_3O_4, and magnetic in proportion e purity of the original Fe_2O_3 used.

mproved Method and Means of Producing Lead Oxide. J. Noad, igh-street, East Ham, Essex. Eng. Pat. 21,175. November 8, 1895.

olten lead kept in a state of constant agitation is oxidised by means s of air and water. The agitation breaks up any partially-oxidised particles containing a core of pure lead, this action being more perfectly accomplished on the surface by the spray of water, which is at once dissociated into its elements, explosively dispersing the adjacent particles, and stripping off the coating of oxide. An oxide ranging from pale straw to deep red can be obtained by regulating the temperature of the bath of lead. The apparatus employed is an enclosed melting-tank fitted with an agitator. A circular horizontal pipe, having a number of jets looking downwards supplies the air which plays on the surface of the metal, a fan-blower being directly connected with it, and driven off the agitator. A series of vertical drip-pipes furnish the water. The oxide which escapes as a fume is collected in a series of hopper-shaped separators. The complete plant is shown in plan and elevation, part of which is in section.

Improvements in Apparatus for the Treatment of Sewage and other Liquids. E. W. Ives, 2, Strand, Derby. Eng. Pat. 16,034. July 20, 1896.

This patent tank combines a detritus separator and sump, storm overflow, precipitating tank, filter, and ventilating chamber. By means of the latter, advantage is taken of the flow of the effluent to compress air, with which the filter is automatically aërated. There are four figures.

An Improved Process and Apparatus for the Manufacture of Calcium Carbide. W. R. King and F. Wyatt, both of 19, Old Slip, New York, U.S.A. Eng. Pat. 13,881. June 23, 1896.

Both the furnace and arc principle are abandoned. A conical heap of crushed lime and coke is made over a carbon electrode placed vertically in the base of the heap. A thin carbon core connects it with the upper vertical electrode, which at the beginning just enters the "nose" of the heap. This upper electrode runs in insulated guides, so that as the fusing and conversion into carbide progresses, it sinks by its own weight, and keeps contact with the thin carbon core. Despite the enormous temperature necessary for the reaction to take place, the mass is such a bad conductor that little heat is given out, and the men can easily work round the mass. As the reaction proceeds, a nugget of carbide is formed, which is removed by a pair of tongs, worked on a swing bracket. A simple form of open furnace is described, should it be desirable to use an arrangement of this nature. By replenishing the heap and inserting a fresh core, the process is made almost continuous. There are two figures.

Improvements in Manufacturing Metallic Fluorides. W. Mills, 20, Anstey-road, Peckham, S.E. Eng. Pat. 20,377. October 29, 1895.

Ammonium fluoride is prepared by heating a finely-powdered mixture of ammonium, sulphate, and calcium fluoride to about 350°C. in a subliming retort. Ammonium fluoride sublimes along with traces of the sulphate. From this, fluorides of the alkaline earths and metals precipitated by ammonium hydroxide are prepared by double decomposition of their chlorides or sulphates. Fluorides of sodium, potassium, barium, and strontium can be made differently. With sodium, ammonium hydroxide is added to weak brine and hydrofluoric acid in the gaseous state passed through the mixture. Compound fluorides can be prepared by precipitation from mixed solutions—for example, the precipitation of artificial cryolite.

Improvements in Obtaining Precious Metals from Solutions. J. S. McArthur, 12, Knowe-terrace, Pollokshields, N.B. Eng. Pat. 16,634. September 5, 1895.

The solution is passed through a box filled with iron or steel plates coated with graphite or lead oxide, which act as anodes and cathodes for the passage of an electric current of about 5 amperes and 2 volts. The plates are notched alternately at the top and the bottom, and placed about ¼-inch apart; the cyanide solution therefore follows an up-and-down course in passing through the box. The coating of the plates is stated to prevent the formation of ferro-cyanides at the anode, and to obviate the undue adhesion of the precipitated gold to the cathode.

THE SUBSIDENCES IN THE CHESHIRE SALT DISTRICTS.—Last week the brine pumpers in the Northwich district elected Messrs. E. Milner (of the firm of Messrs Brunner, Mond, and Co.) and T. Ward (the Salt Union), and Dr. Bowman (Messrs. Bowman, Thompson, and Co.) as their representatives on the board which is now being formed to administer the Act providing redress for sufferers from brine pumping. The other members of the board will consist of three representatives of the Cheshire County Council, one of the Northwich Rural and two of the Northwich Urban Councils. At the present time subsidence is taking place most rapidly, and some of the largest buildings, built on the composite plan, have had to be raised. In the compensation area 549,179,000 gallons of brine are pumped annually, and this represents a tax of £6,864. 14. 9d., which, it is estimated, will meet all demands.

MERSEY AND IRWELL JOINT COMMITTEE.

THE usual monthly meeting of this Committee was held on Monday, at the Boardroom, Mosley-street, Manchester. In the absence of Sir J. Hibbert, the chairman, and Mr. Alderman Thompson, deputy chairman of the C mmittee, Dr. B Hewitt (Cheshire County Council) presided. The Finance Sub-committee recommended that the clerk be authorised to issue precepts for the following sums being the second half of the amount required from the constituent authorities to meet the expenditure of the Joint Committee for the year ending 31st March, 1897:—Lancashire County Council, £700; Cheshire County Council, £262. 10s.; Boroughs of Bolton, £87. 10s.; Bury, £87. 10s.; Manchester, £525.; Oldham, £87. 10s.; Rochdale, £87. 10s.; Salford, £175.; Stockport, £87. 10s. The recommendation of the Sub-committee was adopted. Mr. T. W. Killick moved the adoption of the report of the Consulting Sub-committee. It stated that the Mossley Corporation were now treating their sewage by precipitation, and would shortly have filters in operation. The Sub-committee, therefore, recommended that a further extension of time for one month be granted them to complete their works. The Hyde Corporation, Mr. Killick stated, had sewage works which were not in full operation. The works were not properly used, and the Sub-committee had had to take action against Hyde. Some time ago the authorities at Hyde informed the Sub-committee that they had stopped the works, so far as filtration was concerned, and that the matter was under consideration with a view to the extension and improvement of the works. On the 1st June the case of Hyde was adjourned for one month in order that the Corporation might present a scheme, and on July 6 the Committee passed a resolution that a period of two months should be allowed during which a scheme should be presented by the Hyde Corporation to the Local Government Board. Correspondence had since taken place, but the Sub-committee thought the time was past for making experiments, and they recommended that the clerk be instructed to take proceedings against the Hyde Corporation. The Aspull Urban Gouncil were making good progress with their sewers, and the Sub-committee recommended that an extension of time for one month be granted to them. The Committee recommended that an extension of three months be granted to the Chadderton District Council, and that proceedings be taken against the Prestwich Urban District Council, the explanation of that authority not being satisfactory. They also recommended the taking of proceedings against the Barton-upon-Irwell District Council. The Hayfield Rural District Council had commenced the construction of sewers and outfall works, and the Sub-committee therefore recommended that the further consideration of their position be adjourned for 3 months. Serious complaints had been received with reference to the condition of the Chorlton brook, and the chief inspector had reason to believe the pollution came from Audenshaw, the cause of complaint being to a great extent sewage which the Audenshaw authority had contracted to put into the Manchester Corporation sewers. The inspector advised the Sub-committee that the Audenshaw Council had done nothing, and the Sub-committee therefore recommended that penalties be applied for against Audenshaw, who were already under an order of the court. Sir H. Roscoe had prepared a report upon the analyses of 25 samples of the effluent from the sewage works of local authorities. Of these 15 were good, seven fair, and three bad. The Sub-committee recommended that the clerk be instructed to write to the Worsley and the Swinton and Pendlebury Urban Councils, whose effluents were described as bad, stating that the Joint Committee required that they should be improved.—The report of the Committee was adopted.—In the case of the Bredbury and Romiley Urban Council, in regard to which the Committee were asked to determine what further action should be taken, the matter was referred back to the Sub-committee.—The chief inspector (Mr. R. A. Tatton) reported that the total number of visits paid during the last three months was, to sewage works 544, and to manufactories 1,786.—The Chemical Sub-committee reported as to the works which were being carried out, or promised to be put into execution, by various firms along the watershed, with a view to remove deleterious matter from the streams. The sub-committee reported that during the past month Sir H Roscoe had analysed 29 samples of effluent from manufactories within the watershed. Of those 6 were fair, 13 unsatisfactory, and 10 bad, and the Sub-committee recommended that the clerk be instructed to write to the firms whose effluents were classified as unsatisfactory, informing them that the Joint Committee required that they should improve upon the same. With regard to the firms whose effluents were stated to be bad, the sub-committee recommended that the chief inspector be instructed to report further upon their position. The representatives of two firms attended before the committee to show cause why proceedings should not be taken against them, and, after hearing their explanations, extensions of time were granted them in which to carry out necessary purification works. The report of the Chemical Sub-committee was adopted, and the meeting then adjourned.

Reports of Companies.

THE WHITE LEAD COMPANY.

The directors, in their report for the year ended December 31st la state that the profit and loss account again shows a large loss in tradi In September, 1895, it was determined to dispense with the services the then manager, Mr. A C. J. Charlier, and Mr. A. A Millns, w had then recently been acting as sub-manager, was appointed mana of the business. On Mr. Millns becoming manager, he re-organised clerical staff and instituted many changes, both at the works and in business, which the board felt had become absolutely necessary. Th changes reduced the amount of salaries and wages previously paid, increased the efficiency. During the present year, under the mana ment of Mr. A. A. Millns, the business has been conducted on soun principles, and it is anticipated that when the accounts for 896 made up they will show a greatly improved state of the busin Difficulty had been encountered in procuring suitable ore for the c pany's process, and a portion of the loss for 1895 is attributable to cumstances connected with that cause. The increased price for ore has, however, stimulated increased supplies from the home mi the ore from which is more suitable, and there is no longer the difficulty in obtaining supplies of suitable raw material. The comp is now able to save a considerable portion of the white lead f escaping with the steam after leaving the condensers, which formerly found so difficult to do, with the natural consequences that percentage of white lead obtained from the ore has sensibly increa and the quality has improved. Further improvements have b effected and additional plant has been provided with the view reducing expenses and increasing efficiency. A keg-making plant been added, so that the company now makes its own, and is abl supply other firms with iron kegs, and the manager reports a satisfactory saving in the cost has already resulted. Sett tanks have been made under the condensers, in which to store water after passing through the condensers and washing troughs, economy in the cost of water has thus been effected. A drying ho has been fitted up by utilising the old steam drying pans for dry imitation red as well as ordinary white lead, which can now be drie less than half the time previously occupied. A branch line from railway siding to the furnaces has been laid, and a weight bridge check the weight of all goods coming into and going out of the wo in bulk, has been purchased and fitted up. Improvements in varnish factory have been carried out, and the factory is be extended. An important source of profit will thus, it is hoped, opened up for the company. The Glasgow city offices have been let, and the business is now carried on entirely from the works Possilpark. Sir Henry Tyler has continued to provide the compa with all necessary capital to carry on the business, and the total debtedness of the company to him in respect of advances, interest, rent amounted on December 31st, 1895, to £38,348. No direct fees have from the first been taken. The profit and loss account sho a loss on the year's working of £11,098.

[Regarding the statement about Mr. Charlier, we understand th notice of his intention to resign at the end of six months was given a week before the last general meeting, and it was understood that Chairman would communicate the fact to the meeting. This, howev was not done. Ostensibly, therefore, the directors decided to dispe with the services of Mr Charlier about two months after he had gi in his own resignation.—Ed *C. T. J.*]

DIVIDEND.

San Jorge Nitrate Company (Limited). The directors of t Company have declared an interim dividend at the rate of 10 per ce per annum, free of tax, for the half year ended June 30th, payable October 19th

A REMARKABLE FAILURE.

GEORGE WILLIAM BESWICK, residing at Church Vi Northenden, and carrying on business under the style of "Geo W. Beswick and Co.," at 79, Silver-street, Manchester, and 41, Ne John-street, Liverpool, as a merchant, recently came up for his pub examination in bankruptcy. In reply to questions by Mr. A Potter, assistant official receiver, he stated that for seven years up 1890 he was in partnership with a Mr Cooper, and traded as Edwa Hamer and Co., at 12, Tib-street. That partnership was dissolv because Cooper would not attend to business. The debtor took noth out of that business. He commenced business as a cloth merchant 70, Silver-street, Manchester, in August, 1890, and from August, 18 he also carried on the business of a general merchant at 41, Nor John-street, Liverpool. In the Liverpool billhead the firm w described as "George W. Beswick and Co. importers of miner

chemicals, and colours, Central Buildings, North John-street, Liverpool, and Silver-street, Manchester; established in Manchester, 1883." The heading was so described by Mr. J. Mountford, the manager of the Liverpool business. He denied that it was deliberately done with the intention of making people believe that the firm was established in the mineral, colour, and chemical trade in Manchester in 1883. When he began business in 1890 he had £200. of his own and £500. of borrowed money, in addition to an old debt of £200. to a relative, who was now a creditor. He admitted that he was practically insolvent in 1890. He had no experience of the business in minerals, colours, and finishing commodities, which was the nature of the Liverpool business. The business was begun at Liverpool because of the statements Mr. Mountford made with regard to the possible profits, and because he thought it would relieve him in Manchester. He placed implicit reliance on Mr. Mountford, and if he had been deceived it was his misfortune and the misfortune of other people. Except during two months, he never examined the books of the business when he went to Liverpool; nor did he take back any notes of sales to Manchester. He had no details given to him with regard to sales; the information he received was only of a general kind His liabilities amounted to £5,498. 8s. 6d., and his assets to £378. 9s 8d., leaving a deficiency of £5,119 18s. 10d. The causes of his insolvency were insufficiency of trade, shortness of capital, bad debts, and "this misfortune in Liverpool." Asked what he meant by "this misfortune in Liverpool," he said that what he meant was the sale of goods at a sacrifice by his Liverpool manager, Mr. Mountford. He denied that Mr. Mountford acted on his instructions in selling goods under cost price. A letter from the debtor to Mr. Mountford having been read, in which he advised Mr. Mountford to "press forward a few transactions even at a slight loss," the debtor admitted having written the letter, but said the circumstances were exceptional. Speaking generally, the sales at a loss were made without his consent. Asked to be a little more careful in his answers, the debtor said he was answering from memory to the best of his power, and he could do no more. He admitted that his books had been indifferently kept. No entries had been made in his cashbook since December, 1894. He attributed this to the pressure on his time and his anxiety of mind. It was in June, 1894, that he first became aware of his insolvency. Nearly the whole of his present liabilities had been contracted with a full knowledge of his insolvency. In answer to questions as to certain bill and other transactions in association with one William Anderson, he said that what was done was not intended as a dodge, but it might have been one. The object was to get the use of money to meet his requirements. The examination was adjourned till November 9.

CYANIDING IN THE COLORADO GOLDFIELDS.

OWING to the special attention that has been paid lately to the development of the goldfields of Colorado it is only natural that there should be some inquiry as to the prospects of the cyanide process in this district. Considering the nature of the ores there can be very little doubt that the cyanide process which is used in extracting the gold and silver from ores is that which will prove of most value in this country. It is now some four years since the process was introduced into Colorado, and, in common with most other new methods, it was represented as being adaptable for "every combination of ores," wonderfully simple in its operation, and extremely efficient in saving a high percentage of precious metals at a ridiculously low cost, and necessitating but the simplest kind of machinery and apparatus. Of course this description was regarded by those who had had any experience with the cyanide process as a ridiculous exaggeration, and probably the patentees themselves would not have put forward any such preposterous claim. The very natural result, however, was that a large number of men, possessed of but limited means, and still more limited metallurgical knowledge, invested large amounts in putting up cyanide plants, with the inevitable issue that they were ruined. On the other hand, some mine managers went to the other extreme, and, condemning the process as worthless, absolutely refused to employ it upon their mines. When the true value of cyanide was recognised and its adaptability for low grade ores appreciated, it was found to operate very finely in the treatment of a large and varied class of ores, with the result that there are at present several large mills running in this country which are employing the cyanide process There are others also in course of erection, and, although it is not possible to recognise the cyanide process as the saviour of the gold mining industry in Colorado, it is nevertheless proving a very pronounced factor in the output of some of the mines. It must be remembered, however, that the process is not adaptable to all classes of ores, and it would be rank folly to put up mills for the treatment of all classes of ores without first finding out their nature. Having discovered by means of careful laboratory experiments the precise character of the ores to be treated, it is then quite time enough to spend a large sum of money upon the erection of a cyanide plant. Generally speaking, however, it may be said that all oxidised ores are more or less amenable to the cyanide process, and particularly those ores which contain very fine gold. Many of the mines in this disirict contain gold of an exceedingly fine character; but, on the other hand, the same contain ores of only a partially oxidised nature.

When these occur an increased consumption of cyanide has to be adopted, and the expense of treating the ore is considerably added to.

Where coarse gold has to be treated it can be saved by amalgamation, either before or after cyaniding, or it can often be saved as a concentrate together with the heavier metals after the fine gold has been removed by cyanide. Cyanide of potassium, the solvent used to dissolve the gold and silver from the ores, is very readily decomposed by any acid, and as this salt is the principal item of expense it becomes necessary to neutralise, as speedily as possible, any acid in the salt. Speaking theoretically, one hundred and thirty parts of cyanide of potassium should dissolve about one hundred and ninety-seven parts of gold, or, say, one ounce of cyanide to one-half ounce of gold; but practical operations on a large scale require from sixteen to twenty ounces of cyanide to dissolve one ounce of gold from a ton of unere-, ore.

CHEMICAL MANURES IN BRAZIL.

THE Belgian Consul at St. Paul reports that different manures imported from abroad have been now started with in the cultivation of coffee, and those who have used them have only had congratulations for themselves on their initiative. To come into general use their cost must be brought within the reach of the generality of planters, which has not thus far been the case Brazilian taxes—indirect—have interfered, while most of the planters, knowing little of scientific agricultural matters, are completely ignorant of the nature and quantity of manure to use, as well as of the manner of utilising it and the period at which it is proper to spread it. This explains why they hesitate to avail themselves of it, whilst it is notorious that the soil of many plantations is already exhausted and requires artificial fertilisation. Phosphate of lime is the manure most used, and Lupton, rue S. Bento; Upton, rue Florencio de Abreu; Lion and Co; and Camille Levy, are houses quoted by the Consul as engaged in the sale of phosphates. To manufacturers desirous of sending phosphates the Consul thinks it useful to make the following recommendations: (1) State the price per 1,000 kilogs., the phosphate being packed in full sacks weighing 100 kilogs. each; (2) send with each consignment a rigorous qualitative and quantitative analysis of the substance; (3) as far as possible, give indications of the quantity it is necessary to apply to each coffee plant.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for July, 1896 The total shipments were 83,296,939 gallons, compared with 69,845,930 gallons in July, 1895. The total for the seven months ending July 31st, 1896, was 512,884,267 gallons, against 472,205,209 gallons during the same period in 1895. The details of the shipments are as follow:—

			Gallons.
		CRUDE PETROLEUM.	
Total,	July,	1896	13,8 9,485
,,	,,	1895	7,605,057
		NAPHTHAS.	
Total,	July,	1896	1,094,214
,,	,,	1895	1,08 ,606
		ILLUMINATING.	
Total,	July,	1896	64,452,484
,,	,,	1895	57,412,190
		LUBRICATING AND PARAFFIN.	
Total,	July,	1896	3,879,172
,,	,,	1895	3,730,599
		RESIDUUM.	
Total,	July,	1896	1,638
,,	,,	1895	15,638

NITRATE STATISTICS.—The Permanent Nitrate Committee's statistical circular for October, 1896, shows:—Total exports to Europe, September, 1,425,000; loading for Europe, October 1, 2,684,000 quintals; imports, Europe, September, 75,730; deliveries, Europe, September, 43,500; visible supply, Europe, 1st October, stocks and afloat, 467,665 tons.

INDUSTRIAL CLASSES AT THE YORKSHIRE COLLEGE.

THE DYEING INDUSTRY.

THE report on the work done in this department at the Yorkshire College, Leeds, states that in the seventeenth session (1895-1896) the number of students attending the dyeing department though lower than last year (61 day and 25 evening) quite equals the general average attained during the whole period of the existence of the department. It is confidently anticipated, however, that the greater facilities for original research and for practical dyeing, which are now on the point of being provided by the Clothworkers' Company by an important extension of buildings, will attract an increased number of students. The report proceeds:—

During the past session the variety of our dyehouse work has been much the same as in previous years, and has included experiments in the dyeing of wool, cotton, silk, unions (wool and cotton), skin-mats, and leather. In the dyeing of unions a more extended scheme of instruction has been pursued than hitherto, and special cloth having been obtained for the purpose, series of two-colour effects have been dyed according to different typical methods. This work has been found both instructive and interesting by the students, and it is proposed to continue and extend this part of the scheme next session.

The research work of the department has been continued on the same lines as last year and with similar success. Special attention has been directed to the study of the various natural yellow colouring matters. These are particularly interesting at the present time, because their chemical constitution, of which we have long been ignorant, is now being gradually made known; and it is gratifying to know that the work undertaken in this department has assisted in throwing some light upon the matter. That the value of the results already achieved in this part of our work is recognised and appreciated, is testified by the fact that the Chemical Society of London has again placed a grant of £30. at our disposal.

It may be well, also, to mention that the new and cheaper method of mordanting wool with bichromate of potash, discovered in the course of our dyeing experiments, and mentioned in the report of last year, is already being successfully adopted in certain branches of the dyeing trade.

Some of the research work has been done with materials supplied by the Imperial Institute of London, to the authorities of which we have now been indebted for some time past for help of this kind. The benefits derived from this co-operation are regarded, however, as mutual, and a letter received from Sir Frederick Abel in the early part of this year shows that our examination of the Morinda-root or Al dye of India, and the process we have described by which the difficulties connected with its application can be readily overcome, have stimulated the Indian Government to institute a searching inquiry into the whole question of its distribution, cultivation, etc., in order to see if its declining use by the natives can be arrested by introducing the process referred to. In a similar manner we occasionally receive dyewood plants from Mr. W. T. Thiselton-Dyer, F.R.S., Director of the Royal Gardens, Kew, and notes giving the results of our examination of these appear from time to time in the monthly Kew Bulletins Our latest contribution of this kind appears in the January, 1896, number, and refers to the dyeing properties of the root of *Geranium wallichianum* from Kashmir. By taking up investigations of this kind, in addition to our ordinary work, we hope gradually to establish a reputation for the Dyeing Department of the Yorkshire College as a centre of information on all subjects pertaining to dyeing.

Our experiments on the Action of Light on Dyed Colours, carried out in connection with one of the Committees of the British Association, from which we receive annually a small grant, have been continued as heretofore. A report, giving the results obtained with various red, orange, and yellow colours, was read at the meeting of the Association held in Ipswich last September. During the past Session wool and silk patterns, dyed with various blue and green colouring matters, have been exposed, and will be reported upon at the Liverpool meeting this year. Patterns, dyed with numerous brown and black colouring matters, will be exposed during the next twelve months. Our best thanks are due to Mr. James A. Hirst, formerly a member of the Dyeing Committee, for his kindness in providing the necessary facilities for exposing these patterns each year in his grounds at Adel, near Leeds.

At the close of last Session Mr. W. M. Gardner, F.C.S., who was originally a student of the College, and subsequently for thirteen years a member of the staff of the Dyeing Department, was appointed head master of the Chemistry and Dyeing Department of the Bradford Technical College. Mr. Gardner leaves us with every good wish on the part of the Dyeing Committee for the success of his work in the Bradford school. For the post of assistant lecturer and demonstrator thus rendered vacant the Committee has been fortunate in securing the ervices of Mr. R. B. Brown, F.C.S., also a former student of the department. Since leaving the College Mr. Brown has been engaged in dyeworks, and has also held the post of Lecturer in Chemistry and Dyeing in the Technical Schools of Luton and Leicester, so that he returns to us eminently qualified to fill the post to which he has been elected.

Among the appointments gained by students since the issue of our last report may be mentioned the following:—Dr. Bablich, with Messrs. Meister, Lucius, and Brüning, colour manufacturers, Hoechst a/Main; Mr. F. Cope, with Messrs. Williams Bros. and Co., colour manufacturers, Hounslow; Mr. W. Dickinson, with Messrs. Grandage and Co, dyers, Bradford; Mr. O. Gunnell, with Messrs. Johnson Bros., dyers, Liverpool; Mr. W. N. Hodgson, with Messrs. Wood and Houldsworth, manufacturers, Horsforth; Mr. D. Mac with the Strathblane Printing Co., dyers and calico printers, Strathblane, N.B.; Mr. L. Pate, with Messrs. Whittaker Bros., dyers, Paisley; Mr. J. Pomphrey, with Messes. McCallum, dyers, Paisley; D. P. Rice, with Messrs. Atkinson and Co, manufacturers, Hudfield; and Dr. C. Rattner, with the Scottish Oil and Chemical Co., Glasgow.

This list does not include those who have entered their father's business. It may be pointed out that Messrs Bablich, Dickie and Gunnell are students of the 1895-96 Session, who pass, therefore, direct from the College to the works of the firms above-mentioned. Information is also to hand that certain of our former students have succeeded in gaining more lucrative appointments during the past year, *e.g.*, Mr. S. Jackson has gone recently to Madras to superintend the dyeing department of Messrs. Binny and Co; Mr. Sunderland has been appointed teacher of chemistry and dyeing at the Luton Technical School These facts show in a gratifying manner that the work of the department in training young men to enable them to enter various branches of the dyeing trade is recognised as of some value and similar evidence is contained in letters received from our students.

During the session excursions to works were arranged, those of the following firms being visited:—Messrs. Trumble and Co., and Mr. James Reffit and Sons, Leeds; Messrs. Pickles, Smithson, and Pickles, Dewsbury and Ravensthorpe; Messrs. W. Grandage and Co., Bradford. In these works the students had the opportunity of seeing various practical operations connected with the printing of wall-paper, the manufacture of dyewood extracts and other colouring matters, and the bleaching, dyeing, and finishing of cotton, wool, and silk in various forms of manufacture. The dyeing Committee accord their thanks to the above-mentioned firms for their courtesy and kindness in throwing open their works to the inspection of our students.

The thanks of the Committee are also due to the following firms for their continued generosity in presenting supplies of various dyestuffs in use in the experimental dyehouse:—Badische Anilin und Sodafabrik, Farbenfabriken vormals Fr. Bayer and Co.; Actiengesellschaft für Anilinfabrikation, Berlin; Farbwerke vormals Meister, Lucius, and Brüning; Messrs. Leopold Cassella and Co.; Messrs. Dahl and Co; Messrs. Leonhardt and Co; Messrs. K. Oehler; Société de l'Industrie Chimique, Basle; Société Anonyme des Matières Colorantes St. Denis; Messrs. Kallé and Co.; Messrs. Durand and Huguenin; Messrs. J. R. Geigy; Messrs. W. Noetzel; Messrs. Brooke, Simpson and Spiller; The Clayton Aniline Co.; Messrs. Read Holliday and Sons; The British Alizarin Co; Messrs. Pickles, Smithson, and Pickles; Messrs. R Burton and Sons; Messrs. J. R. Hans and Co; Messrs. John Marshall, Son and Co.; Messrs Thomas Crossley and Co.; Messrs Wood and Bedford; Messrs. Peter Spence and Co; Messrs. John Riley and Sons.

LEATHER INDUSTRIES.

As the Session which has ended (1895-1896) is the fifth in the history of the Department, and concludes the period for which the original endowment on which the lectureship was founded were guaranteed, it seems appropriate to preface our Annual Report with a short retrospect of the work which has been accomplished, and to sketch the possibilities of future development; since the time has come when the Department must pass from the experimental stage, and become a permanent portion of the College, with sufficient financial guarantees to insure the continuance of the work. We believe that the record is such as will more than justify the resolution taken by the Leather Industries Committee, and accepted by the Council of the Yorkshire College, to create a permanent Professorship in connection with Leather Industries, and to raise a fund towards the endowment of the Department, and to furnish suitable buildings in which to carry on the work.

It will be recollected that the Department originated in the desire expressed by members of the Leather Trade that the College should give instruction in leather manufacture on somewhat similar lines to those so successfully adopted by the Textile and Dyeing Departments. It was foreseen from the outset that from the character of the trade and the comparatively small development of its scientific side, the attempt would be attended with difficulties much greater than those

encountered in the Departments just mentioned; and, although the experience of the last five years has proved that they can be overcome, it has also shown that this is not to be accomplished by merely copying the methods of other Departments, but that plans must be gradually worked out adapted to the special conditions of the case. It was obvious from the outset that under College conditions no useful instruction could be given in the actual handwork of the trade, which is very varied, and involves a large amount of manipulative skill; that from the want of uniformity of the raw material, a wide experience and practice on large quantities was essential to a thorough knowledge of the trade, and that expense alone, apart from other and even more weighty considerations, would make such teaching impossible in a College, of which the proper function is to supplement, and not to supersede practical experience. On the other hand, a clear knowledge of the theory of technical processes is absolutely essential for any systematic application of science to their improvement; while in practical manufacture this is obscured under a mass of detail which the learner cannot disentangle, and the methods and appliances of exact science are almost entirely absent. We have endeavoured to overcome these difficulties, so far as the state of present knowledge permits, by a course of lectures in which great attention is given to the general principles which underlie all leather manufacture; and in describing particular branches of the manufacture, a special point is made of illustrating these principles, and explaining the relation to each other of analogous methods employed on different classes of leather, of which the purely "practical" man is apt to be extremely ignorant from the difficulty of gaining access to works other than those in which he has actually gained his experience. The second point, that of the want of satisfactory methods of investigation, has been met by a laboratory course of which the first part consists almost entirely of instruction in the analysis of the more important materials used in the trade, and the student only proceeds to experiment on manufacturing processes when he has learnt to accurately check his results by chemical methods. To the development of these methods much time has been devoted, with the result that a constantly increasing number of requests come to the department for the analysis of tanning materials, and the elucidation of points of difficulty which occur in manufacture. This is so advantageous to the department in keeping it in touch with the trade, and in furnishing useful subjects for investigation, that we should be very unwilling to discourage it, and there can be no doubt of its practical value to manufacturers, since they are quite willing to pay for the help given; but, on the other hand, the amount of time consumed by it is matter for serious consideration. To minimise this evil as much as possible, the lecturer proposes to devote a considerable portion of the fees received for it to the payment of a competent assistant who will undertake much of the routine chemical work involved. There can be no doubt that in the present condition of our knowledge the development of a "research department" of a complete and extended character would be of more immediate commercial benefit than a large extension of elementary teaching. Such a department would also give an opportunity for advanced chemical students not directly connected with leather manufacture to pursue certain branches of technical investigation further than they could conveniently do in the general chemical laboratory.

As regards the teaching work actually accomplished in the past five years, it may be stated that 48 individual day students have received instruction in the department, of whom 14 have stayed two sessions or more. Of these about one-half belong to Yorkshire, while the remainder are from other parts of England, with a few colonial and foreign. More than one-half are sons or relatives of those already engaged in the trade, and of the remainder a large proportion rather contemplate qualifying themselves as managers or chemists than establishing themselves as actual manufacturers; so that the idea of the department causing increased competition by bringing more men into the trade is scarcely justified by facts, and is certainly not to be taken into account in comparison with the advantage given to present manufacturers by a supply of skilled scientific managers.

WAGES IN THE ENGINEERING TRADE.—Messrs. Crossley Brothers and Messrs. Mather and Platt, two of the largest engineering firms in the neighbourhood of Manchester, announce that they will give the whole of the two shillings asked for by the men instead of a shilling this week and a shilling in January.

SALT SHIPMENTS TO THE EAST.—Messrs. Thomas Higgin and Co. report that the shipments of salt from Liverpool for Calcutta from Jan. 1 to Sept. 30 amounted to 97,554 tons, compared with 141,666 tons during the same period of 1895, and 207,914 tons in 1894. The clearances from other ports amounted to 39,264 tons. The clearances from Liverpool for other Indian ports for the same period were 12,403 tons. The probable clearances for October are put down at 17,250 tons for Calcutta and 2,000 tons for Rangoon.

Correspondence.

**** We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE LIVERPOOL MANURE CASE.

(To the Editor of the Chemical Trade Journal.)

SIR,—On the 19th of September you reported the prosecution of The Fish, Bone, and Waste Products' Manure Company (*C.T.J.* No. 487), and as one having made a speciality of this subject, I think there is some reason to differ with the evidence given by Mr. E. W. T. Jones, the chemist engaged in the prosecution. The facts of the case do not appear to bear the construction which Mr. Jones puts upon them.

The defendants were charged with allowing their statements in the guarantee to be false in certain particulars, viz, describing the nitrogen in the equivalent of sulphate of ammonia, also with representing soluble phosphate and potash neither of which were present.

As concerning the sulphate equivalent, Mr. Jones is reported as having alleged that "no farmer would understand." I scarcely think he was justified in assuming such a state of infantile bliss on the part of the farmers as a body. There are doubtless many to be found who are capable of telling Mr. Jones the contents of ammonia sulphate in either nitrogen or ammonia; and I think Mr. Jones' evidence might logically be reversed, because sulphate of ammonia is so generally known to farmers as to make it presumable that they well know what is meant by the term, quite as well as if nitrogen alone were used.

It cannot be said that there is any immorality in stating the equivalents in either ammonia or the sulphate, and that the defendants had acted in *bona fides* is clearly shown by both Mr. Jones and Dr. Thorpe (Somerset House), whose figures reveal their having delivered twice the amount of nitrogen which they had contracted to do.

I disagree entirely with Mr. Jones upon the question of the fine in respect of a ¼ per cent. deficit in potash. It is impossible to claim this variation as one over which the convicted ones had control, but if Mr. Jones had credited them with the excess of nitrogen over the warranty, all ground of argument would have been expunged, and the case should have been dismissed.

Again, I differ with Mr. Jones in his objection to the coupled statement of the phosphates in the total as "soluble and insoluble phosphates." The defendants were surely within their legal privilege in the use of these terms. It is well known that some kinds of raw phosphates contain material quantities of "natural soluble phosphates," and to couple the two phosphates in the way described gives a warranty, which, in the absence of soluble figures being named, must be taken as implying "raw phosphates." I believe the convicted firm sold the manure as a "raw production;" if so, the title won't imply "total phosphates" to be valued as "raw phosphates."

The plea of a farmer's ignorance will not hold good. He has full opportunity of reading himself up in the simple question of equivalents, and if he fails to do so ignorance should be no excuse at law. In my opinion, the magistrates should have dismissed this case, as it involves the principle of fining "John Seller" because "Thomas Negligence" did not know.—I am, yours, etc,

10, Infirmary-street, Leeds. ALFRED FIRBY, F.I.C.

[We are led to understand that the pending appeal has been abandoned, so that the case is no longer *sub judice*, and therefore open to discussion.—ED., *C.T.J.*]

THE BRITISH STEEL INDUSTRY.

WE are hearing a great deal on all sides just now about the supremacy of everything that is not English, but to judge by the statistics which have been compiled by the British Iron Trades Association there is a future in steel at all events. The production has increased astonishingly, but, nevertheless, there is every probability and expectation that the demand for steel will continue on a large scale. It is no secret that some descriptions of that metal, and notably blooms and billets, have lately been even scarce, and that there is at the present time difficulty in having orders filled for current delivery. Not only so, but there is a continuous substitution of steel for wrought iron for structural and other purposes, and it is probable, although by no means certain, that the great advance in the output of steel will be coincident with a decreased production of malleable iron, which has been on the wane for a number of years—so much so, indeed, that now we do not produce one-half the quantity that we turned out little more than ten years ago. The growth of the steel trade in all branches has been so rapid that the plant now in operation in this country is generally of the most modern kind, and if our manufacturers can only keep free from strikes and get fair terms from railway and shipping companies, they may take heart of grace for the immediate future.

Trade Notes.

PERSONAL.—It is interesting to note the marriage of Miss Rachel Eckersley Huxley, daughter of the late Professor Huxley, to Mr. Harold Shawcross, of Rochdale, which took place recently at the Rosslyn Hill Unitarian Chapel, London.

THE PEOPLE'S PALACE ENGINEERING LABORATORY.—A new and important development has (says the *Chronicle*) taken place on the technical side of the People's Palace, Mile End. The governors have set apart a large portion of the buildings to a school of engineering, which is now equipped with a fine worksh p and laboratory. The laboratory is especially valuable, as it is provided with testing apparatus of the latest kind, and is adapted to the most advanced teaching in engineering science. The governors have placed Mr. A D. Low at the head of this new development.

NEW WORKHOUSE FOR WOLVERHAMPTON.—At the meeting of the Wolverhampton Board of Guardians last week, Mr. W. Plant (chairman) presiding, the Clerk said he had received from Mr. F. T. Langley, on behalf of Thompsons' trustees, an offer of a piece of land on the Wednesfield-road, opposite New Cross Villa. The site occupied ninety-two acres The matter was referred to the General Purposes Committee. We did not think the departure of Messrs Lysaght, Limited, would react *quite* so quickly as all this. Mr. Price gave notice that he should move next week that the word "pauper" be no longer used in the official documents of the Board, and that there should be substituted the word "persons" or "people" or "poor." Mr. Cope advised Mr. Price to study a dictionary

CRUDE PETROLEUM AS FUEL FOR WARSHIPS.—The chief engineers of the United States Navy have reported favourably regarding the adoption of crude petroleum as fuel for warships instead of coal. Experiments have been made by leading engineers, and the apparatus has been submitted to the severest tests The proportion of evaporation has been found to be at the rate of twenty pounds of water to one pound of oil, which is double that of the best coal. The pressure of steam is constant, which means an economical fuel, and there are neither ashes nor dirt to trouble stokers. Petroleum fuel, which can be taken aboard at sea, occupies less room than coal, and it is ascertained that if a vessel be able to steam 1,000 miles with coals, she can cover double the distance with the some bulk of oil. Further space now occupied by water ballast can be utilised as a petroleum bunker, and as oil runs out water takes its place, so that the bunker is always full.

WATER GAS FOR MANCHESTER.—A communication has been received from the Local Government Board in reference to the application of theManchester Corporation for power to borrow money for the erection of a carburetted water gas plant. At large numbers of gas-works in various parts of the country plants for the manufacture of this description of gas have been and are being erected, and so far no difficulty has been raised on the part of the Local Government Board. But in the letter now received the Board, while sanctioning the borrowing of money for the purchase of the land on which to erect the plant, and for storage accommodation for the water gas when it is made, states that it must refuse to sanction the borrowing of money for the plant itself. It is, we understand, suggested, if not distinctly asserted, that the gas is of a dangerous character, and that on that account its use must be placed under proper regulations. such as Parliament should be asked to sanction. The Corporation is therefore informed that if it intends to go forward with the proposal, it must do so by means of a Bill.

THE AGRICULTURAL SCHOOL AT HOLMES CHAPEL.—The Agricultural and Horticultural School and Farm at Holmes Chapel, which was opened by the Duke of Westminster on the 9th inst., has been established by the Cheshire County Council at a cost of nearly £10,000. The pupils are received from the age of fourteen years upwards, and the complete course extends over three years, no pupils being taken for less than one year. The work is arranged so that the mornings are devoted to school work and the afternoons to practical work on the farm or in the garden. Every student is compelled to take part in every operation and kind of work presenting itself in the course of the year. The practical work does not consist of watching others, or in taking part occasionally in some of the pleasanter work, but in regularly doing everything, pleasant or disagreeable, as it occurs. In this strictly practical aim the school differs from similar instit tions e tablished by County Councils in other parts of the country. The Wye Agricultural School, for instance, maintained by Kent and Surrey, while giving thorough instruction in the sciences bearing on Agriculture, utilises the farm attached to the institution for the purposes of illustration rather than practical work. Farm schools are rapidly coming into existence in various counties, and provided this particular development is not overdone they will prove useful adjuncts to the collegiate centres.

Market Reports.

TAR AND AMMONIA PRODUCTS.

There is no change in benzols, prices remaining as last quo Carbolic acids keep about the same, whi'e naphthas may be sa still be represented by 1s 3d for crude and 1s 6d. for ord Anthracene is being variably quoted, but on the whole prices see remain as last fixed by the combine Pitch is busier and encouraging, though prices still flag a little—nearest value is 2 31s, f.o.b. East Coast.

Sulphate of ammonia has dropped another point, but in the Lo market there has been a decided improvement in the dem Beckton is now only offering in forward position up to the en this year, having lowered the price for the period to £7 7s 6d prompt. London outside makes figure at £7. 10s., Liverpool £7 Hull £7 8s 9d, and Leith £7 6s 3d

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is more active, both for prompt forward deliveries but as yet there is no change in the directi higher prices, which continue mainly in buyers' favour Chlo have further declined, owing to the excessive competition, and ca soda is still offered for forward business at slightly easier rates— prices are as follows: f.o.b. Liverpool, 77%, £9 5s.; 74%, £8 70%, £7 7s 6d; 60%, £6 7s 6d. per ton nett, 10 ton lots upwards Alkali, 58%, is quiet for home trade at £3. 7s. 6d. per f.o.r., both for prompt and forward delivery, and large stocks are by the makers. Soda crystals unchanged Bleaching powder se more freely, both for prompt and forward—present values at £6 to £6 12s 6d., f.o.r., and for contracts over 1897 £6 5s., f.o.r. saltcake business is doing at 20s to 2 s., f.o.r., and more inquir future delivery Sulphur remains steady in price at £4 10s. per f.o.r There is still a good inquiry for potash, caustic and carbo and prices are unaltered. Sulphate of copper slightly easier at to £16 5s per ton Sulphate of iron generally in good request, supplies are less plentiful Acetates of lime, brown and grey, steady, and with a slightly firmer tendency for spot delivery. W powdered arsenic a little easier for prompt at £22. f.o.r., and £21. per ton for forward, but stocks are very light. Aniline oil and are firm, both for prompt and forward business Sulphocyanides Yellow prussiate of potash 6d per lb.; soda 5d. per lb.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron easy: Scotch warr closed at 47s 3d.; Middlesbrough 38s. 3d cash, and hema 47s. 2½d. Copper steady: Chili bars, G.O.B.'s and G.M.B closed at £47. 6s. 3d. to £47. 11s. 3d. cash, and £47 11s. 3d £47. 16s. 3d. three months Tin firmer: Straits closed £56. 1s. 3d. to £56. 11s. 3d. cash, and £56 13s 9d. to £57 12s. three months; Australian, £57. 2s. 6d. English ingots, £60 Lead: Spanish, £11 6s 3d.; English, £11 10s. Silesian spel ordinary, £17. Nickel, 1s 2½d. Antimony, £29 to £29 Quicksilver: First hands, £6 12s. 6d.; second hands, £6. 11s. *Copper shares* steady: Cape, 2⅜ to 2⅝; Comapo, 2¼ to 2 Libiola, 2⅛ to 2⅜; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 2 to 24½; Tharsis, 5½ to 5¾.

GLASGOW, WEDNESDAY.—Market flat, with good busine Scotch done at 46s. 5d. and 46s. 3d. cash, also at 46s 6½d 46s. 5½d. one month; closing with buyers at 46s 3d. cash, sellers 46s. 3½d. Cleveland done at 38s. 5d. cash, also at 38s. 8d. 38s 6d one month; closing with buyers at 38s. 3d. cash, sellers 38s. 3½d.

REPORT ON MANURE MATERIAL.

There is no improvement in any department, excepting what is ha occasioned by advancing freights. It is still four months before manure season can be expected to open, and that leaving buyers am time in which to turn round, they seem still disposed to wait bef covering the remainder of their requirements in nitrogenous materi In phosphatic material, as has been previously noticed, requireme are in the main already covered

Mineral phosphates for early shipment are altogether neglected U.K. buyers, and shippers, being pretty well committed for some w ahead, are not at all anxious to make further sales for shipment bef next year. For Florida 75/80% rock, 1897 steamer shipment, 6½ per unit is the quotation, though 6d. might be accepted for good lin and good ports For South Carolina River and Peace River roc 5¼d. is quoted, but 5d. per unit is probably nearest value. Algeri 58/63% is held for 5¼d. per unit, and 63/70% for 5½d.

g to difficulty in getting suitable freights, River Plate bones are ıore firmly held, but so far no advance is reported as paid. The ıay therefore still be put at £3. 12s 6d per ton. Crushed ee bones may be had, ex store Liverpool, at £3. 15s. per ton, hipment £3. 16s. 3d , ex quay, is asked. Bombay bone meal firmly held, and it is doubtful whether £3. 12s. 6d. per ton ıow do for shipment ; £3. 15s. per ton is asked for parcels nand, ex quay Liverpool.

e of soda is very quiet, and fine quality may now be had at ıd. per cwt. on spot. Due cargoes, ordinary quality, are worth more than 7s. 7½d. per cwt.

scellaneous nitrogenous material there is very little doing, prices being relatively dearer than those for sulphate of ammonia.

YERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

.— The firm tone of Palm oil continues, but the prices being r the limited supply that is offering are practically prohibitive, re are no sales of importance to record. Olive is firm and to be dearer. For instance, sales of Malaga have been made 10s. to £31. 10s. per tun. Linseed is rather stronger, the Liverpool makes in export casks now being 17s. 6d. to 18s. 6d., There has been a big jump in cottonseed, and the market irly steady at the advance. Liverpool refined is quoted 16s 3d. 6d , and American firmly held for 17s per cwt. Castor oil is in all positions, the price for both good seconds Calcutta and ssure French now being 3d per lb Tallow is strong and good business being done at the old rates, and in some cases nce. Resin is steady and moving well except in the fine grades. ıs and common are active, however. Prices are: Common, per cwt. Mediums, 5s 9d. to 6s. 3d., and fine, 6s 6d to 7s. 9d. . Spirits of turpentine are strong, and in good demand, at to 21s. 6d. per cwt. Petroleum firm, at 5¼d. to 5⅞d. for refined, and American, 6⅜d. to 7¾d. per gallon.

OURS.- Prices are steady, and practically without change, Oxfordshire, common, £10., medium, £12., best, £15. ıire, common, 40s.; medium, 50s., best, 60s. ; Welsh, best, conds, 50s., and common, 18s.; Irish, Devonshire, 40s. to rench, J.C., 65s. Umber 40s. to 45s. White lead, £16. ıd unchanged. Venetian red, £6. to £10. Cobalt : Pre- xide, 9s. 9d. ; black, 9s.; blue, 6s. Oxide of iron : Common, edium, £10. ; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

ıur is still about the only article conspicuously stiff, holding ıs it does to £4. 15s. figure and not over plentiful at that. e of copper tends to the rise, and some holders are asking a ore. This also is the case with alkali. Bleaching powder and soda, however, are both a little easier, and are quoted fraction- vn. The rest of the stock chemicals are unchanged. Sulphate ıonia during the week has gone one worse, having sounded the ıth of £7. 7s. 6d. prompt f.o b. Leith, the lowest ever touched ıw. The whole of the make is not down to that ; some favoured ll command £7. 8s 9d. The outlook on the article is a very ıe. More of the country gasworks are going in for ammonia y plant, and there is the risk of a glut. In paraffin and mineral situation has undergone no change. Values are as last shifted. prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; sh, 48/52°, £4. to £4. 15s. nett, Tyne ; white alkali, £4 2s. 6d. to £5. 2s. 6d. nett, Tyne ; alum in lump, £5. to £5. 5s. lasgow ; caustic soda, white, 74° £8. 5s., 70/72° £7. 5s , 60/62° .., and cream 60/62° £6., all nett, Liverpool; bleaching , £6. 12s. 6d. nett, Tyne ; saltcake, 20s. ; borax, English, £18., and boracic acid, £28. nett, Glasgow ; bicarbonate of -cwt. casks, £6 7s. 6d , and 1-cwt. casks £6. 15s. nett, Liverpool ; nate of potash, 4½d. nett, for Scotch and English deliveries (for 4¼d. nett, f.o.b. Glasgow) ; bichromate of soda, 3¾d. nett, foı and English deliveries (for export, 3½d. nett, f.o.b. Glasgow) ; e of potash, 4¼d. less 5%, any port ; nitrate of soda, 7s. 10 d. ¼d. ; sulphate of ammonia, £7. 7s. 6d. to £7. 8s 9d. prompt, f.o.b., salammoniac, first and second white, £37. and £35. nett, t ; sulphate of copper, £16. 5s. to £16. 10s. less 5%, Liverpool ; scale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1⅞d. per lb. ; ı wax, 120° semi-refined, 1 13/16d. to 2⅛d. per lb.; paraffin spirit ıa), 7½d. per gallon ; paraffin oil (burning) No. 1, 6¼d., and , 6½d., at Glasgow and other big centres, for Scotch buyers ih sales ½d. to ¾d. lower) ; ditto (lubricating) 865° £4. 10s. to s., 885° £5. 10s. to £6., and 890/895° £6. to £6. 10s. Week's s of sugar at Greenock were 8,800 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals are very dull, with little or no alteration in prices. Soda crystals, £2. 2s 6 l. per ton, gross weight locally. Sulphur scarce at £4. 15s. per ton. Caustic 70% £7. 10s , to £7. 15s. per ton. 76/77% £9. to £9 5s. Shipments continue fairly good

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett ; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett ; soda ash, 48%, £4. 2s. 6d. per ton, nett ; do., 50%. £4. 5s. per ton, nett ; do , 52%, £4. 7s. 6d. per ton, nett : alkali, 36%, £3. 7s 6d per ton, nett ; white alkali, 48%, £4. 12s. 6d. per ton, nett ; do., 50%, £4. 17s. 6d. per ton, nett ; do., 52%, £5. 2s. 6d. per ton, nett ; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett ; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett ; do., 100° Tw., £3. per ton, nett ; do., 140° Tw., £3. 7s. 6d. per ton, nett ; soda crystals, casks, £2. 2s. 6d. per ton, gross weight ; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight ; chlorate of potash, 5d. per lb., less 6% ; pearl hardening, £3. per ton, nett ; pure white sulphate of alumina, £3 17s. 6d. per ton, nett ; blanc fixe, £7. 5s. per ton, nett : chloride of barium, refined crystals, £6 15s. per ton, nett ; do , 90/95% crude calcined, £6. per ton nett ; sulphide of barium, crystals, £4. 15s. per ton, nett ; carbonate of alumina, £30. per ton, nett ; aluminate of soda, £30. per ton, nett.

SALT.—South Durham Salt is steady at 9s. to 9s 6d. per ton, f.o.b. Tees.

COALS.—The market is very little changed. The demand is better for bunker and steam coals, while coke continues firm for both local and export. Prices to-day :—Northumbrian steam, 8s. 3d. to 8s. 6d per ton ; second qualities, 7s. 3d. to 7s. 6d. per ton. Small steam, 3s. 3d. to 3s 6d per ton. Gas coals, firm at 6s 6d. to 7s. per ton. Household coals, 10s. to 11s. per ton. Coke, 14s 6d. to 15s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—There have been several changes in the prices of linseed and cotton oils during the week, and a further advance in rape oil of about £2. per ton. The principal imports into Hull up to date have been :—Linseed, 561,883 quarters, against 438,844 quarters ; rapeseed, 70,326 quarters, against 104,859 quarters ; cottonseed, 122,222 tons, against 129,607 tons ; olive oil, 14,869 casks, against 10,181 casks ; rape oil, 3,055 casks, against 6,159 casks ; oilcakes, 10,068 tons, against 10,934 tons ; tallow, 54,903 cwts, against 10,722 cwts. ; turpentine, 13,350 barrels, against 14,554 barrels Linseed oil has advanced about 7s 6d. per ton on the spot, and is quiet at 15s. 6d., sellers, naked ; October-December quoted at 15s. 7½d ; January-April, 16s. 3d. paid ; boiled and refined, £1. to £2 per ton extra. Export during the week has been 1,380 cwts. Refined cotton oil is 10s to 15s per ton dearer, closing with a firm though somewhat irregular tone, and is quoted 14s 6d. to 14s. 9d., naked spot, and 15s. to 15s. 3d., November-April ; casks £1. and ordinary barrels £1. 10s. per ton extra. Export of refined oil for the week has been 5.000 cwts. Olive oil unchanged. Tallow remains very firm, and in good request. Turpentine, 21s. 9d per cwt. Green olive grease, £20. per ton, c i f., in barrels. Pale Belgian oleine, £17. 15s. ; saponified, £18 5s, c.i.f. Hull. Green olive soaps, 60%, £16. per ton, c.i.f. Hull. Brown Yorkshire grease, £8 per ton ; distillate, £14. and £16. per ton, f.o b. Hull.

CAKES.—Linseed cakes, steady ; 95% pure, £5. 12s 6d. per ton. Oilcakes, £4. 12s. 6d. Russians and Americans nominal in the absence of spot supplies. Cotton cakes firm : Spot, best makes, £4. to £4. 2s. 6d. ; seconds, £3. 17s. 6d. ; best makes, November-April, £3. 10s sellers, £3. 7s. 6d. buyers. Rape cakes scarce : Black Sea, £2 17s. 6d. ; Jamba, £3. 5s. to £3. 10s.

PAINTS.—Makers still well employed. White and red leads unchanged. Dry mineral colours, £3 10s. to £8 Black, blue, green, Venetian red, and oxide of iron, in oil, from £11. per ton. Ready-mixed paints, in tins, £24 per ton. Paint remover, 25s. to 30s per cwt. Imperial black varnish, £5. 5s. per ton, f.o.b. Hull.

New Companies.

Robert Frazer, Sons, and Co., Ltd.—CAPITAL, £5,000., in shares of £10. each. This company has been formed to take over the business now carried on by the Company of the same name at Whitehaven, and to trade as manufacturers and dealers in grease, oils, paints, and mining accessories.

Tom Smith and Co., Ltd.—CAPITAL, £2,000, in shares of £1. each. This company has been formed to carry on the business of oil manufacturers and merchants.

Marlborough Brick Company, Ltd. CAPITAL, £10,500., in 500 cumulative preference shares (6%), and 10,000 ordinary shares of £1. each. This company has been formed to manufacture bricks and fire-clay goods, etc. The subscribers to the memorandum of association are:—F. O. Pile, Sandford-park, Ranelagh, co. Dublin, married woman; A. P. Hudman, Marsworth, Sandford, Dublin, married woman; R. A. Rossborough, Esplanade-villa, Broybrick, manufacturer; E. A. Rossborough, Esplanade-villa, Broybrick, married woman; J. P. Pile, Sandford-park, Ranelagh, co. Dublin, contractor; R. W. Colles, 1, Wilton-terrace, Dublin. J P.; E. Lynch, 40, Killeen-road, Dublin, builder's manager; J. Thompson, Mount Collyer, Belfast, brick manufacturer.

Gold Extraction Syndicate, Limited.—CAPITAL, £2,000. shares of £1. each. This company has been formed to adopt an ag ment with M. B. Zerener, and to carry on the business of extra and reducers of ores and minerals, as well as merchants in the sam

Lyte's Metallic Woven Hair Thread Company, Ltd. CAPI £14,000. in 5,000 preference and 9,000 ordinary shares of £1. and also 1,000 founders' shares of £1. each. This company has formed to acquire and work the invention stated in the title. The scribers to memorandum of association are:—C. H. M. Lyte, 7, C street, Redcliffe-gardens, London, S.W., inventor; J. W. Knowle Clement's-lane, London, E.C., accountant; H. W. Bridger, 2, Da inn, London, W.C., solicitor; B. Samuelson, 135, Fleet-street, Lon E.C., accountant; W. H. Wickham, 14, Essex-street, Strand, Lon solicitor; H. J. Sanderson, 64, Mark-lane, London, E.C., engin B. Corcoran, 31, Mark-lane, London, E.C., engineer.

IMPORTS OF CHEMICAL PRODUCTS

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 26th.

Acetic Acid—

Holland,	50 pks.	R. W. Greeff & Co.
,,	10	A. & M. Zimmermann
,,	161	Little & Johnston
Belgium,	68	Brummersteedt & Co.

Alkali—

France,	60 c.	J. Barber & Co.
Germany,	205	Spies Brs. & Co.
France,	60	,,

Alum—

Holland,	30 cks.	R. W. Greeff & Co.

Antimony Ore—

Portugal,	2 t.	Coverlay & Westray
Spain,	7	Union Lighterage Co.
France,	50	Smith, Sundius & Co.

Asbestos—

Germany,	£30	T. H. Lee
Canada,	256	Deering & Robottom
Germany,	150	Craven & Co.
Italy,	23	A. Laming & Co.

Barium Chloride—

Germany,	56 cks.	Drolenvaux & Bremner

Barium Oxide—

Germany,	47 cks.	Vokins & Co.

Barytes—

Holland,	20 cks.	J. L. Lyon & Co.
,,	118	W. Harrison & Co.
Germany,	45	,,
Belgium,	57 brls.	J. L. Lyon & Co.
,,	72	W. Harrison & Co.

Bromine and Bromide of Iron—

Germany,	122 pks.	A. & M. Zimmermann

Camphor—

Germany,	133 pks.	R. Warner & Co.
,,	30	S. Figgis & Co.

Caoutchouc—

Singapore,	46 c.	Nat. S. S. Co.
U. States,	72	Major & Field
Rep. Col.,	10	Fruhling & Goschen
Germany,	9	F. Huth & Co.
Zanzibar,	38	L. & I. D. Jt. Co.
Aden,	24	Major & Field
Penang,	40	Prop. Bull Wf.
Madagascar,	3	S. Figgis & Co.
Aden,	168	L. & I. D. Jt. Co.
Singapore,	25	Elkan & Co.
Sydney,	65	McIlwraith & Co.

Castor Oil—

France,	10 brls.	F. Boehm
Belgium,	12	A. Brown & Co.
France,	50	J. T. Morton
,,	50 cs.	C. Windschengl & Co.

Caustic Potash—

Germany,	60 drs.	J. M. Steel & Co.

Chemicals *(otherwise undes.)*—

Holland,	£238	T. H. Lee
Germany,	67	Craven & Co.
,,	106	F. Claydon & Co
,,	20	A. B. Curtis & Co.
,,	429	T. H. Lee
,,	23	R. W. Harris
Belgium,	32	O. Scholaig
Holland,	37	J. M. Steel & Co.
,,	13	F. Boehm
U. States,	1,088	E. Bailes
Belgium,	15	Société John Cockerill
Germany,	330	A. & M. Zimmermann
,,	6	Jenson & Nicholson

Copperas

Holland,	10 cks.	A. & M. Zimmermann

Cream of Tartar—

Spain,	16 cks.	B. & F. Wf. Co.
France,	5	W. C. Bacon & Co.
Holland,	68	Kirkpatrick & Co

Dyestuffs—

Anthracene

Holland,	176 cks.	Burt. Boulton & Co.

Cochineal

Canaries,	16 bgs.	J. W. Borland
,,	21	G. S. Bruce
,,	24	Sperling & Williams
,,	10	Knowles & Foster
,,	16	Swanston & Co.

Extracts

Holland,	5 brls.	R. Bailz
U. States,	30 bxs.	W. Burton & Sons
France,	93 cks.	L. J. Levinstein & Sons
U. States,	100 cs.	Skilbeck Brs.
France,	23	B. & F. Wf. Co.
Denmark,	1	M. D. Co.
,,	1	Sorensen & Co.
Canada,	160	A. J. Humphery
U. States	50	Deering & Robottom

Fustic

Mexico,	50 t.	W. Shelcott
,,	14	Park Macfadyen & Co.
B. W. I.,	14	L. & I. D. Jt. Co.

Gambier

Singapore,	485 bgs.	S. Barrow & Bro.

Indigo

Holland,	10 chts.	F. W. Heilgers & Co
E. Indies,	19	L. & I. D. Jt. Co.
,,	7	Elkan & Co.
,,	24	R. von Glehn & Sons
,,	20	Arbuthnot, Latham & Co.
,,	10	P. Macfadyen & Co.
,,	5	Eales, Prince & Co.

Logwood

B. W. I.,	138 t.	L. & I. D. Jt. Co.
Mexico,	138	Park Macfadyen & Co.

Myrabolams

E. Indies	1,366 bgs.	W. Shelcott

Saffron

E. Indies,	1 cs.	J. J. Alps & Co.

Shumac

Italy,	50 bls.	Clark, Gray & Co.
,,	100 bgs.	Skilbeck Brs.

Tanners' Bark

U. States,	11 t.	T. W. & T. A. Smith
Adelaide,	1	L. & I. D. Jt. Co.

Valonia

A. Turkey,	100 t.	A. J. Humphery
,,	52	Anning & Cobb
,,	20	Hicks, Nash & Co.
,,	100	Hore & Scrivener

Farina—

Germany,	100 bgs.	Seaward Brs.
Holland,	150	J. Barber & Co
,,	50	W. Ritchie & Son
,,	125	J. Knill & Co.

Gamboge—

China,	7 cs.	L. & I. D. Jt. Co

Glucose—

U. States,	50 pks.	300 c.	C. Southwell & Co.
Germany,	14	40	Beresford
U. States,	103	574	J. Keiller & Co.
,,	200	1,151	E. & T. Pink
,,	1,371	1,341	Robinson, Son & Co.
,,	500	500	Thames S. Tug & L. Co. Ld
,,	500	500	Union Ltge. Co.
,,	50	312	Hore & Scrivener
,,	1,583	8,690	Bellamy & Co.
,,	500	1,000	L. Norman & Co.
,,	250	250	Vokins & Co.
,,	500	500	Humphery & Co.
,,	1,000	1,082	Ohlenschlager Brs.
,,	500	500	Knowles & Padgett
,,	250	250	C. S. Lovell
Holland,	91	21	J. Barber & Co.
U. States,	125	750	Page Son & East
,,	300	1,745	Deering & Robottom
,,	2,825	6,745	R. G. Hall

Glue—

Holland,	£47	G. Raim & Co.
,,	52	Carey & Sons
Belgium,	132	J. Barber & Co.
U. States,	70	Elkan & Co.
Germany,	123	Phillipps & Graves
Belgium,	40	Leach & Co.
,,	150	Taylor Brs.
Holland,	57	H. Johnson & Sons
Germany,	160	L. & I. D. Jt. Co.
Canada,	qty.	L. & I. D. Jt. Co.
France,	55	Vokins & Co.
Austria,	125	Ohlenschlager Brs.
France,	10	Bennett S. S. Co.

Infusorial Earth—

Germany,	£250	A. Haacke & Co.

Insecticides—

Austria,	20 brls.	City Coml. Wf.

Iodine—

Germany,	1 cs.	J. W. Drysdale & Co.

Lamp Black—

U. States,	60 hds.	J. Pullen

Lead Acetate—

Germany,	15 cks.	F. Boehm

Litharge—

Germany,	3 cks.	J. Barber & Co.

Manure—

E. Indies,	50 t.	A. Hunter & Co.
Germany,	18	F. W. Berk & Co.
,,	256	Odams Manure & Chemi. Co.
,,	30	Phillipps & Graves
B. Ayres,	24	S. M. Frankenstein & Co.

Metallic Oxide—

Germany,	10 cks.	Brit. Anti-Fouling Compo Co.

Methylic Alcohol—

Germany,	5 dms.	Stei

Mica—

Madras,	£1,278	W. M. Smith &

Molasses—

U. States,	50 cks.	300 c.	Be
,,	50	250	E. & T.

Ochre—

Belgium,	4 brls.	Pickford
France,	62 cks.	J. L. Lyon
Holland,	3	7 pks. Phill

Paint—

Germany,	1 cs.	T. H

Phosphate Rock—

E. Indies,	100 bgs.	L. & I. D. Jt

Pitch—

U. States,	12 cs.	Lanham, M

Plumbago—

Austria,	416 cks.	Pepys Dowgate
Germany,	110	J. Thrudder, Son,
,,	57	O. Sch

Potash—

Canada,	48 c.	Charles &

Potassium Carbonate—

Germany,	20 c.	R. W. Greeff &
,,	120	Pear
,,	628	W. G. Bla

Potassium Oxymuriate—

Sweden,	20 kgs.	G. Bear &

Potassium Sulphate—

Germany,	50 bgs.	T. H.

Quicksilver—

Italy,	750 btls.	L. & I. D. Jt.

Rosin—

France,	23 brls.	Moore &
U. States,	75	T. Nichols &

Rosin Oil—

France,	150 brls.	A. Brown &
,,	60	Barratt, Tagart, &
R. Colu'bia,	200	H. Hill &

Saltpetre—

E. Indies,	132 bgs.	Hosier, M &
,,	1,635	Lucas & Spen
Germany,	15 cks.	P. Hecker &
,,	70	S. E. Railway

Soda—

Holland,	200 c.	R. W. Greeff &

Sodium (Metal)—

Belgium,	44 cs.	A. C. U

Sodium Acetate—

France,	15 cks.	H. La

Starch—

Belgium,	80 cs.	J. Barber &
Holland,	29	,,
,,	64	Carey &
Germany,	400	L. Sonn &
,,	90	Phillipps & Gr
Belgium,	585	E. & T.
,,	80	Taylor
Germany,	1,720	Horne &
Belgium,	100	R. Lehmann &
,,	330	F. Claydon &
,,	1,030	T. H.
Holland,	160	Phillipps & Gr
,,	195	Herms, Ferns, &
,,	1,585	Little & John
U. States,	200 brls.	Beck & Pull
Belgium,	260 cs.	Leach &

Stearine—
France, 80 sks. H. Walbaum & Tosetti
Holland, 51 bls. J. Owen
" 51 Mordaunt Brs.
France, 150 bgs. H. Hill & Sons
Belgium, 364 "
Sulphuric Acid—
Holland, 10 pks. Perkins & Homer
Tartaric Acid—
Holland, 4 pks. B. & F. Wf Co.
Germany, 8 cks. F. C. Devon & Co.
Ultramarine—
Holland, 10 cs. Hernu, Peron, & Co.
Belgium, 5 brls. Leach & Co.
Holland, 5 cs. G. Rahn & Co.
" 4 cks. Philipps & Graves
Varnish—
Germany, 7 pks. T. H. Lee
Belgium, 5 Wilson & Co.
" 5 Stobbs Wilson, & Co.
U. States, 7 Allan Brs & Co.
Vermilion—
Hong Kong, 35 cs. City Coml. Wf., Ld.
White Lead—
Belgium, 20 cks. Perkins & Homer
Germany, 20 Burrell & Co.
" 96 D. Storer & Sons
Holland, 5 Brit. Anti-Fouling Compo Co.
Germany, 29 W. A. Lyon & Co.
Belgium, 16 J. L. Lyon & Co.
Wood Pulp—
Norway, 1,210 pks. M. G. Skrammes
Holland, 4,660 Henderson, Craig, & Co.
Sweden, 400 W. G. Taylor & Co.
Norway, 80 "
" 500 Tough & Henderson
Holland, 270 Phillipps & Graves
Norway, 300 W. E. Bott & Co.
Holland, 51 C. S. Lovell
Zinc Oxide—
Germany, 5 cks. 50 brls. M. Ashby, Ltd.
" 95 W. Balchin
Holland, 15 Phillipps & Graves
U. States, 100 M. Ashby, Ltd.
Holland, 104 brls. "
" 30 Fellows, Morton, & Co.

LIVERPOOL.

Week ending September 24th.

Antimony—
Antofagasta, 300 bgs. 450 sks.
Antimony Ore—
Antofagasta, 158 bgs.
Barytes—
Antwerp, 100 bgs.
Rotterdam, 73 cks.
Bone Black—
Philadelphia, 20 bxs. E. T. Houghton & Co.
Borax—
Mollendo, 200 sks. A. & S. Henry & Co.
Valparaiso, 1,200
Caoutchouc—
Valparaiso, 68 bls. Kleinwort, Sons & Co.
" 7 14 bgs. F. Huth & Co.
Castor Oil—
Calcutta, 750 cs. Ralli Brs.
" 250 Petrocochino Brs.
" 700
Chemicals (*otherwise undescribed*)
Hamburg, 16 cks. 2 cs.
Cod Oil—
Hamburg, 50 brls.
St. John, N'fld., 5 cks. J. J. Langley
Colours—
Antwerp, 2 cks.
Rotterdam, 1 cs. 5 tubs
Cottonseed Oil—
New York, 151 brls.
N. Orleans, 337
Cream of Tartar—
Tarragona, 10 pps.
Oporto, 3 cks. Baird Brs.
" 1 Sachse & Klemm
Dyestuffs—
Annatto
Bordeaux, 5 cks.
Havre, 3 bls. Cunard S. S. Co., Ld.
Cochineal
Teneriffe, 39 bgs. Brown, Shipley & Co.
Las Palmas, 10 Kuhner Henderson
" 8 Swanston & Co.
Divi Divi
Hamburg, 784 bgs.
Extracts
Hamburg, 190 cks. 31 bxs. 23 cs. 60 bgs.
Fustic
Colon, 193 ps. Widow, Duranty & Son
Tampico, 2,519 Oetling & Co.
" 7,316 W. H. Thomson & Co
Indigo
Karachi, 8 cs.
Logwood
Belize, 116 t. 3 c.
Madder
Smyrna, 3 bls.
Orchella
Lisbon, 24 bls.
Valonia
Syra, 800 bgs. G. T. Serini
Smyrna, 182 t. 148 Barry Brs.
" 26 1
" 52 G. Essayan & Co.
Constantinople, 226 K. K. Gulbenkian
Patras, 600
Farina—
Fiume, 200 bgs.
Trieste, 100 Kuchler & Co.
Glucose—
New York, 200 brls. T. M. Duche & Sons
" 675
Glue—
Boston, 5 brls. 6 crts. Richards & Ward
Rotterdam, 8 cs.
Infusorial Earth—
Rotterdam, 335 bgs.
Iodine—
Valparaiso, 45 brls. A. Gibbs & Sons
Lead Acetate—
Hamburg, 19 cks.
Lithopone—
Rotterdam, 18 cks.
Manganese—
Hamburg, 10 cks.
Manganese Ore—
Visagapatam, 1,000 t. Darwen & Mostyn Iron Co.
Manure—
Philadelphia, 213 bgs.
Mineral White—
Fiume, 100 bgs.
Ochre—
Cartagena, 19 brls.
Paraffin Scale—
Philadelphia, 500 cs. Anglo-Am. Oil Co.
" 600 brls.
Pyrites—
Huelva, 2,894 t. Matheson & Co.
" 1,200 H. Bath & Co.
Rosin—
New York, 20 brls. Larrinaga & Co.
Saltpetre—
Karachi, 330 bgs.
Hamburg, 50 14 cks. 20 kgs.
" 597 Ralli Brs.
Soap—
Philadelphia, 63 crts.
Hamburg, 1 cs.
New York, 1 bx.
Naples, 31
Philadelphia, 4 W. B. Medgley
Soapstone—
Bordeaux, 201 bgs. G. G. Blackwell, Sons & Co.
Starch—
Bremen, 180 cs.
Hamburg, 76
New York, 200 bgs.
Antwerp, 324 J. T. Fletcher & Co.
" 20 cks.
Rotterdam, 74
Stearine—
St. John's, N'fld., 1 brl. T. Boyd & Co.
Antwerp, 9 bgs.
Tallow—
Philadelphia, 40 tcs. Colby & Co.
New York, 91 brls. 1 pk. "
" 101 49 hds. "
Zarate, 259 pps.
Boston, 1,012 853
" 150 J. Mackee & Co.
Philadelphia, 16 J. Morrell & Co.
Tartar—
Bordeaux, 31 cks.
Naples, 1
Ultramarine—
Hamburg, 4 cks. 2 cs.
Rotterdam, 20
Varnish—
New York, 5 brls. W. A. Warren
Rotterdam, 2 cks.
White Lead—
Rotterdam, 29 cks.
Ghent, 24 brls.
Wood Pulp—
Boston, 152 bls.
Gothenburg, 2,782 Becker & Co.
Boston, 406 bdls. Spicer Brs., Ld.
Rotterdam, 286
Zinc White—
Rotterdam, 112 cks.

MANCHESTER.

Week ending September 26th.

Barytes—
Rotterdam, 200 bgs.
Antwerp, 200
Caustic Potash—
Treport, 231 cks.
Chemicals (*otherwise undes.*)**—**
Rouen, 36 cks.
Chrome Acetate—
Rotterdam, 10 cks.
Colours—
Rotterdam, 34 cks. 7 cs. 51 bxs. 112 brls.
Dyestuffs—
Alizarine
Rotterdam 44 cks.
Logwood
Yucatan, 540 t.
Dyestuffs (*otherwise undescribed*)
Rouen, 20 cks.
Farina—
Stettin, 50 bgs. Stott, Coker, & Co.
Hamburg, 500
Glucose—
New York, 50 brls. T. M. Duche & Sons
" 130
Glue—
Rouen, 10 cs. 22 bgs.
Treport, 2 cks.
Rotterdam, 20
Antwerp, 2 brls.
Indigo—
Rotterdam, 4 chts.
Limestone—
Antwerp, 1 cs. J. T. Fletcher & Co.
" 2 crts.
Litharge—
Antwerp, 4 cks.
Lithopone—
Rotterdam. 8 cks.
Mineral White—
Bordeaux, 100 bgs. G. G. Blackwell, Sons, & Co.
Naphthol—
Rotterdam, 4 cks.
Ochre—
Aguilas, 15 bgs. (Thro. Barrow)
Soap—
Bordeaux, 4 cs. J. & P. Hutchison
Starch—
New York, 100 bgs. T. M. Duche & Sons
" 400
Rotterdam, 65 cs.
Stettin, 1,400 Stott, Coker, & Co.
Stearine—
New York, 36 hds. Co-op. W'sale Society, Ld.
Tallow—
Rouen, 60 bgs.
Tar Waste—
Rotterdam, 8 cks.
Tartar—
Bordeaux, 4 cks. J. & P. Hutchison
Tartaric Acid—
Rotterdam. 12 cks.
Ultramarine—
Hamburg, 10 cks.
Waste Salt—
Hamburg, qty.
White Lead—
Antwerp, 5 cs.
Wood Pulp—
New York, 504 bdls. Brown, Brough, & Co.
Kotka, qty.
Zinc Ashes—
Rotterdam, 18 cks.
Antwerp, 12
Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending September 26th.

Albumen—
St. Petersburg, 11 cs.
Alum—
Hamburg, 4 pks. J. Good & Sons
Rotterdam, 1 ck. W. & C. L. Ringrose
Asbestos—
Rotterdam, 12 bls. W. & C. L. Ringrose
Barytes—
Rotterdam, 22 cks. Hutchinson & Son
Bremen, 19 G. Holmes & Co.
" 40
Antwerp, 75 Bailey & Leetham
" 15 H. F. Pudsey
Amsterdam, 48 Hutchinson & Son
Riga, 75 Wilson, Sons, & Co., Ld.
Hamburg, 12 "
Camphor—
Hamburg, 4 cks. Wilson, Sons, & Co., Ld.
Chemicals (*otherwise undescribed*)
Bremen, 3 cks. Veltmann & Co.
Dunkirk, 6 cs. Wilson, Sons, & Co., Ld.
Cod Oil—
Hamburg, 35 brls. Wilson, Sons, & Co., Ld
Colours—
Bremen, 1 ck. Veltmann & Co.
Antwerp, 13 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 37 74 W. & C. L. Ringrose
Dextrine—
Stettin, 100 bgs.
Dyestuffs—
Alizarine
Rotterdam, 2 cks. W. & C. L. Ringrose
Myrabolams
Bombay, 13,192 bgs.
Farina—
Stettin, 300 bgs. Wilson, Sons, & Co., Ld.
Glue—
Antwerp, 3 cks. Bailey & Leetham
Philadelphia, 20 brls.
Rouen, 2 36 bls. Rawson & 1 cs. Robinson
Stettin, 19
Antwerp, 12 Wilson, Sons, & Co., Ld.
Dunkirk, 22 "
Lead Acetate—
Hamburg, 8 brls.
Linseed Oil—
Hamburg, 292 brls. Wilson, Sons, & Co., Ld.
Mica—
Hamburg, 1 cs. Wilson, Sons, & Co., Ld.
Ochre—
Rouen, 30 cks. G. Buckton & Sons
Paint—
Philadelphia, 15 brls.
Phosphate of Lime—
Dunkirk, 270 t.

Potash—
Antwerp, 5 cks 4 cs. Wilson, Sons, & Co., Ltd.
Dunkirk, 20 dms. ,,
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ltd.
Starch—
Ghent, 234 cs. Wilson, Sons, & Co., Ltd.
Bremen, 1,454 Veltmann & Co.
Antwerp, 200 Bailey & Leetham
,, 80 W. Gilyott & Co.
,, 20 Wilson, Sons, & Co., Ltd.
Stearine –
Antwerp, 13 bgs. Bailey & Leetham
Tallow—
Dunkirk, 40 cks Wilson, Sons, & Co., Ltd.
Tar Oil—
Hamburg, 2 cks.
Tartar –
Bordeaux, 2 tks. Rawson & Robinson
Tartaric Acid –
Rotterdam, 4 cks. Hutchinson & Son
Turpentine—
Antwerp, 12 dms. J & T. Seddon
Libau, 51 cks.
Bordeaux, 16 Rawson & Robinson
White Lead—
Rotterdam, 69 cks. Hutchinson & Son
Antwerp, 35 Bailey & Leetham
Amsterdam, 22 Hutchinson & Son
Antwerp, 27 Wilson, Sons, & Co., Ltd.
Rotterdam, 19 W. & C. L. Ringrose
Wood Pulp –
Abo, 124 bls. J Good & Sons
Zinc White—
Rotterdam, 5 cks. W. & C. L. Ringrose

GLASGOW.

Week ending October 1st.

Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son
Albumen—
Hamburg, 5 cks.
Antimony Sulphide—
Hamburg, 1 ck.
Asbestos—
Quebec, 250 bgs.
Barium Sulphate—
Antwerp, 100 pks.
Barytes—
Rotterdam, 133 pks.
Benzol—
Rotterdam, 1 ck

Castor Oil—
Antwerp, 57 cks.
Colours—
Antwerp, 3 cks.
Rotterdam, 19 6 cs. 26 brls. J. Rankine & Son
Hamburg. 2 1
Rotterdam, 32 pks.
Cream of Tartar—
Barcelona, 10 cks.
Tarragona, 4
Dyestuffs—
Alizarine
Rotterdam, 2 bxs. J. Rankine & Son
,, 84 pks.
Extracts
Antwerp, 2 cks.
Madder
Rotterdam, 2 cks J. Rankine & Son
Shumac
Palermo, 1,510 bgs. 105 bls.
Glucose—
Philadelphia, 650 brls.
New York, 499
Manganese—
Hamburg, 21 cks
Manganese Chloride –
Rotterdam, 4 cks. J. Rankine & Son
Ochre—
Alicante, 30 brls.
Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son
Paraffin Scale –
Philadelphia, 258 brls
Phosphate of Lime and Rock—
Ghent, 506 bgs.
Plumbago—
Genoa, 500 bgs
Potassium Prussiate—
Barcelona, 10 cks
Pyrites –
Huelva, 1,775 t. Tharsis Co
Rosin—
New York, 243 brls.
Soap—
Nantes, 3 cks.
Sodium Nitrate—
Rotterdam, 5 brls. J. Rankine & Son
Sodium Salicylate—
Rotterdam, 1 bx. J. Rankine & Son
Starch –
New York, 900 bxs.
Rotterdam, 20 crts. J. Rankine & Son
Amsterdam, 10
Sulphur—
Catania, 19 cks. 692 bgs 27 brls.
Talc—
Genoa, 100 bgs.
Tar Oil—
Hamburg, 5 cks.

Tar Waste—
Rotterdam, 2 cks. J. Rankine & Son
Tartar –
Bordeaux, 60 cks.
Tartaric Acid—
Rotterdam, 2 cks. J. Rankine & Son
Treacle—
Philadelphia, 500 brls. Waddell & Bryson
,, 100
Ultramarine—
Hamburg, 7 cs.
Yarnish—
New York, 8 brls.
Waste Salt—
Hamburg, 263 cks.
White Lead –
Rotterdam, 60 cks. J. Rankine & Son
Wood Pulp—
Gothenburg, 241 bls.
Christiania, 3,511
Hamburg, 1,000
Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son
Zinc Sulphate—
Gothenburg, 20 bgs.

TYNE.

Week ending September 26th.

Castor Oil –
Antwerp, 86 brls. Tyne S. S. Co.
Limestone –
Antwerp, 6 cs. Tyne S. S. Co.
Pitch—
Archangel, 100 brls. J. Hindhaugh & Co.
Salt—
Harburg, 272 t. 10 c. J. C. Swan & Co.
Soap—
Rotterdam, 6 cs. Tyne S. S. Co.
Starch—
Rotterdam, 340 cs. Tyne S. S. Co.
Antwerp, 20 ,,
Stearine—
Antwerp, 6 bgs. Tyne S. S. Co
Tar—
Archangel, 1,045 brls. J. Hindhaugh & Co.
Ultramarine—
Rotterdam, 1 ck. Tyne S. S. Co.
White Lead—
Antwerp, 1 ck. 20 brls. 4 kgs. Tyne S. S. Co.
Wood Pulp—
Copenhagen 80 bls.
Arendal, 60
Zinc Oxide—
Antwerp, 35 brls. Tyne S. S. Co.

Zinc Sulphate—
Gothenburg, 20 bgs.

GOOLE.

Week ending September 23rd.

Alizarine—
Rotterdam, 64 cks.
Aniline—
Rotterdam, 195 cks. 39 cs.
Hamburg, 20
Amsterdam, 2
Caoutchouc—
Boulogne, 12 cks.
Colours—
Hamburg, 3 cs.
Dyestuffs (*otherwise unenumerated*)
Boulogne, 14 cks. 2 cs. 48 pks.
Farina—
Delfszybl, 1,000 bgs.
Hamburg, 130
Harlingen, 20
Glucose –
Calais, 200 bgs.
Glue –
Rotterdam, 20 bgs.
Logwood –
Belize, 400 t.
Potash—
Dunkirk, 2 cks. 30 dms.
Pyrites –
Seville, 1,113 t.
Saltpetre—
Hamburg, 1 ck.
Starch—
Ghent, 307 cs.
Waste Salt—
Hamburg, 270 t.
Wood Pulp—
Hamburg, 600 bls.

GRIMSBY.

Week ending September 26th.

Barytes—
Hamburg, 11 cks.
Caoutchouc –
Hamburg, 3 cs.
Rotterdam, 3
Chemicals (*otherwise unenumerated*)
Hamburg, 17 cks. 1 cs.
Colours—
Hamburg, 10 cks. 52 pks.
Antwerp, 4 36
Dyes—
Hamburg, 20 cks.
Farina—
Hamburg, 5 bgs.
Starch –
Hamburg, 1 cs.
Wood Pulp—
Malmo, 40 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending September 30th.

Acetic Acid—
Sydney, 3 t. 3 c. £87
*B. Ayres, 13 23
Acids—
Auckland, 65 pks. £87
Pelotas, 20 cs. 27
Alkali—
Timaru, 2 c. £20
E. London, 11 6
Rio de Janeiro, 7 t. 13 31
Alum—
Cape Town, 3 t. £25
Rotterdam, 22 cks. 19
Ammonia—
Madeira, 2 cs. £15
Alexandria, 4 11
Rotterdam, 50 drs. 77
Ammonium Carbonate—
Sydney, 20 cs. £26
Melbourne, 12 15

Ammonium Chloride—
Gothenburg, 1 t. 10 c. £32
Salonica, 9 5 68
Auckland, 1 10 32
Trebizonde, 15 26
Ghent, 10 10
Ammonium Sulphate—
Antwerp, 100 t. £750
Nantes, 30 9 c. 230
Bremen, 50 375
Rotterdam, 50 375
Mauritius, 102 15 1,004
Rochester, 188 690
Hamburg, 130 1,141
Amorphous Phosphorus—
Hong Kong. 2 c. £27
Anhydrous Ammonia—
Karachi, 4 cs. £33
Arsenic—
Calcutta, 2 t. £50
Bleaching Powder—
Auckland, 11 c. £21
Cape Town, 1 t. 8 15

Boracic Acid—
Wellington, 10 c. £15
Borax—
Wellington, 10 c. £10
Alexandria, 2 cks. 13
Calcium Chloride—
Lyttelton, 3 t. 18 c. £51
Carbolic Acid—
Rotterdam, 49 cks. £226
Carbonic Acid Gas—
Hamburg, 3 cs. £30
Brisbane, 4 20
Caustic Soda—
Greytown, 5 t. 18 c. £46
Natal, 1 19 46
E. London, 1 8 33
Wellington, 6 6
Auckland, 10 7 75
Pt. Elizabeth, 1 3 30
Melbourne, 3 7 83
Delagoa Bay, 8 5
Sydney, 8 7

Chemicals (*otherwise unenumerated*)
E. London, 20 cs.
Christiania, 1 t. 3 c.
Rotterdam, 1 4
B. Ayres, 32
Natal, 8
Cape Town. 2
Sydney, 15 kgs. 38 pks.
Philadelphia, 5
Gibraltar, 12
Wellington, 33
Auckland, 1 ck.
Calcutta, 3
Adelaide, 7
Citric Acid—
Bombay, 4 c.
Algoa Bay, 1
Cape Town, 1
Karachi, 1 ck.
Rangoon, 2
Auckland, 3
Hamburg, 10
Calcutta, 1 cs.
Mackay, 1

Products—
zarine
etersburg, 6 cs. £300
bay, 50 cks. 290
iline
goon, 5 cs. £56
a, 15 dms. 760
iline Dyes
ourne, 3 cs. £26
thracene
eldorf, 360 cks. £1,889
gne, 480 2,509
erdam, 139 687
phaltum
erdam, 16 bgs. £11
nzol
burg, 51 cks. £217
erdam, 11 dms. 90
kirk, 65 846
nzoline
elton, 20 dms. £25
sosote
on, 25 brls £15
York. 25 cks. 27
sosote Salts
on, 686 bgs. £175
delphia, 470 75
phthaline
report, 49 cks. £49
itta, 1 bx. 26
erdam, 100 bgs. 55
burg, 7 cks. 59
ich
on, 1,500 cks. £90
itta. 35 rnlts 19
York, 965 cks. 3,740 bgs.
brls 1,340
euzen, 250 t. 444
r
gne, 24 brls. £27
burg, 20 10
d, 10 cks. 20 rnlts. 690 dms. 112
r Oil
ien, 10 cks. £24
sels, 30 50
ogne, 30 rnlts. 33
er Sulphate—
adoes, 6 c. £6
um, 10 t. 3 170
ington, 5 88
n of Tartar—
ourne, 12 kgs. £50
ington 10 c. 47
tchurch, 5 22
antle, 10 49
ogen Bromide—
antle, 18 c. £200
fectants—
cy, 8 cs £41
Town, 50 20
apore, 3 cks. 16
bay, 13 pks 44
ica, 5 10
burg, 30 6 dms. 137
mbo, 160 80 58
utta, 9 1 t. 3 c. 29
ourne, 20 43
ondon, 3 17
c—
deloupe, 650 t. £7,150
e—
hing, 1 ck. £330
Oxide—
Town, 3 t. 6 c. £26
ire—
en, 50 t. £140
es d' Olonne, 86 16 c. 500
ort, 10 65
laix, 94 4 527
leaux, 42 172
c Acid—
ey, 20 carboys £—
40 60
ic Acid—
rachee, 10 kgs. 4 cs. £18
phate—
ban, 10 t. £25
sh—
lington, 7 c. £29
gne, 12 40
sh Salts—
kland, 8 t. 13 c. £832
ssium Bromide—
utta, 13 c. £53
ssium Chlorate—
g Kong, 1 t. 5 c. £51
London, 35 kgs. 65
ssium Cyanide—
nantle, 1 t. 6 c. £120
itserrat, 2 12
ney, 10 65
goa Bay, 2 220
wak, 10 cs. 70

Melbourne, 50 513
Yokohama, 20 50
Potassium Prussiate—
Rotterdam 18 cks. £273
Antwerp, 4 56
Saltpetre—
E. London, 5 c. £6
Vigo, 3 t. 14 78
Rio de Janeiro, 3 6 73
Sheep Dip—
M. Video, 19 t. 6 c. £468
E. London, 2 5 88
Calcutta, 4 cks. 20
Invercargill, 50 cs. 125
Dunedin, 440 1,100
B. Ayres, 5 15 1,520 4,733
Soda Ash—
Greytown, 1 t. 17 c. £7
Launceston, 4 1 19
Rio de Janeiro, 8 11 43
Soda Crystals—
Malta, 2 t. £7
Mackay, 2 c. 14
Fremantle, 6 3 35
Sodium Acetate—
Brisbane, 16 c. £28
Sodium Bicarbonate—
Newcastle, 1 £8
Geraldton, 1 7
Brisbane, 2 15
Bunbury, 1 2 c. 7
Natal, 1 15 11
Sodium Carbonate—
Fremantle, 10 c. £—
Sodium Hyposulphite—
Fremantle, 1 t. £10
Sodium Silicate—
Greytown, 6 t. 3 c. £20
Sulphite of Lime and Soda—
Toronto, 10 cs. 10 kgs. £255
Sulphur—
St. Lucia, 1 t. £8
E. London, 1 2 c. 12
Sulphur Dioxide—
Melbourne, 2 t. 4 c. £145
Sulphuric Acid—
Singapore 2 t. 10 c. £24
Hong Kong, 11 cs. 10
Trincomalee, 1 15 10
Superphosphates—
Rotterdam. 96 t. 4 c. £55
Tartaric Acid—
Mackay, 1 c. £7
Malta, 1 ck. 14
Brussels, 3 19
Calcutta, 2 15
Fremantle, 5 35
Melbourne, 20 kgs. 123

LIVERPOOL.

Week ending September 30th.

Alum—

Havana,	7 t.	3 c.	1 q.	£20
Lisbon,	5	10		28
Beyrout,	4	5		22
Bari.	15		2	3
Cape Town,	6	16	2	34
Ibrail,	5			24
Patras,		13	2	3
Varna,	1	5	1	6
Salonica,	4	5		20
Malaga,	2	4		12
Rosario,	3	5		15
Quebec,	1	6		6
Dunedin,	1	1		5
Portland, O.,	3	13		16
Callao,	1	7		7
Galatz,	18	17		89
Montreal,	22	12	1	110
M. Video,	1	1	2	6
B. Ayres,	2	2	3	11
Melbourne,	4	3	2	20

Ammonia (Liquid)—
Callao, 5 c. £9
Ammonium Carbonate—
Corunna, 10 c. £15
Ammonium Chloride—
Antwerp, 1 t. 12 c. £37
Fiume, 6 10
Galatz, 6 12
Genoa, 1 19 35
Bourgas, 12 20
Trieste, 2 72
Ammonium Sulphate—
Bordeaux, 5 t. 1 c. 1 q. £40
Montreal, 5 4 2 40
Philadelphia, 103 2 775
Colombo, 4 12 39
Rouen, 75 10 567
Demerara, 135 1,066

Arsenic—
Montreal, 4 c. £5
Bleaching Powder—
Bilbao, 52 cks.
Bombay, 38 bxs.
Boston, 391 "
B. Ayres, 30 10
Genoa, 113
Hamburg, 10
Havana, 20
Lisbon, 43
Montreal, 52
New York, 25
Paris, 20
Philadelphia, 120 dms.
Portland, Or., 20
Rosario, 7 brls.
St. John, N.B., 5
Santa Catherina, 30
Santos, 4
Boracic Acid—
Naples, 12 c. £18
Rosario 6 9
Montreal, 2 t. 60
Hiogo, 6 146
Borax—
Melbourne, 2 t. £40
Stettin. 4 17 c. 2 q. 97
Rosario, 1 8 25
Montreal, 3 16 3 71
Rotterdam, 21 18 1 428
Piræus, 6 5
Antwerp. 17 5 1 344
Hamburg, 21 5 388
Malta, 1 19
Hiogo, 3 9 37
Calcium Chloride—
Gothenburg, 4 t 8 c. £5
B Ayres, 2 7 6
Hamburg, 2 4
Carbolic Acid—
Newport News, 4 t. 19 c. 3 q. £244
Philadelphia, 12 cs. 50
Baltimore, 1 dm. 11 68
Sierra Leone, 1 13
Hamburg, 1 1 64
Hong Kong, 6 8
Carbon Bisulphide—
Bahia, 3 c. 1 q. £10
Caustic Potash—
New York 5 t. 7 c. £135
Caustic Soda—
Algoa Bay, 12 cs.
Barcelona, 40 cks.
Batavia, 7 dms.
Beyrout, 45
Bilbao, 25
Calcutta, 20
Callao, 40
Ceara, 30
Dunedin, 70
Ferrol, 12
Fiume, 46
Galatz, 189
Genoa, 364
Gothenburg, 100
Hamburg, 30
Havana, 29
Hiogo, 100
Hong Kong, 25
Ibrail, 40
Jaffa, 50
Leghorn, 85
Lisbon, 83
Malaga, 172 6 brls.
Malta, 7
Manaos, 5
Manilla, 50
Melbourne, 171
M. Video. 70
Montreal, 85
Newfairwater, 35 24 t. 13 c.
N. Orleans, 50 brls.
New York, 295 25
Palermo, 2
Oporto, 30
Paris, 35
Philadelphia, 155
Puerto Cabello, 20
Rangoon, 20
Riga, 802
Rosario, 18
Rotterdam, 40
St. Petersburg, 200 50 kgs.
Samarang, 50
San Francisco, 100
San Sebastian, 60
Santos, 50
Seville, 205 25 cs.
Smyrna, 40
Sourabaya, 38
Stettin, 42
Sydney, 38
Valencia, 35
Venice, 82
Vera Cruz, 20
Wellington. 9
Chemicals *(otherwise undescribed)*

Alexandretta	1 t.			£38
New York,	5	2 c.		169
Callao,			1 cs.	6
Palermo,		10		17
Montreal,	4	18	2 q.	
Calcutta,	10	7	1	
Quebec,	4			
Galatz,	5	5	2	
Genoa,	2	10		
Stettin,		18		

China Clay—
Bombay, 148 cks.
Boston, 681
Calcutta. 316
Maranham, 60 bgs.
Melbourne, 10
Vera Cruz, 100
Citric Acid—
Algoa Bay, 5 c. £37
Coal Products—
Aniline Colours
New York, 1 ck.
Aniline Salts
Boston, 45 cs.
Creosote Oil
Bordeaux, 275 brls.
Tar
Accra, 25 brls.
Galatz, 120
Honolulu, 50 dms.
Ibrail. 10
Manilla, 50
St. Petersburg, 100
Copper Sulphate—

Bari.	1 t.	6 c.	2 q.	£19
Konigsberg,	2	3		34
Barcelona,	4	17	2	78
Gothenburg,	2	4	2	34
Antwerp,	1			17
Bahia,	1	1	3	20
Santander,	4	19		80
Quebec,		5	1	4
E. London,		2		3
Riga,	5	2		82
Tampico,	12	11	3	193
Havre,	2	19		45
Galatz,		14		12
Bordeaux,	5	1		83
Danzig,	2			32
Naples,	3	15		57

Copperas—

Tripoli,	3 t.	11 c.		£9
Stettin,	5	2		9
Valparaiso,	2	11	1 q.	5
Alexandria	7	15		13
B. Ayres,	9	12		15
Galatz,	3	18	1	9

Cream of Tartar—
Maranham, 1 c. £6
Disinfectants—
Calcutta, 3 t. 15 c. 1 q. £20
Guano—
Malaga, 99 t. 4 c. £635
Gypsum—
Portland, O., 208 t. 18 c. £616
Magnesia—
Barcelona, 5 cs.
Havre 40
Philadelphia, 15 c.
Corunna. 1 t. 2 £15
Magnesite—
New York, 1 t. 9 c. £10
Magnesium Chloride—
Paris, 10 t. 4 c. £25
Magnesium Sulphate—
Rio de Janeiro, 100 kgs.
Santos, 50 cks.
Manure—
Landerneau, 151 t. 15 c. £301
Muriatic Acid—
Pernambuco, 1 t. 3 c. £14
Callao, 8 9
Oxalic Acid—
Barcelona, 5 t. 11 c. 2 q. £183
Paint—
Antwerp, 2 cks.
Belize, 185 kgs
Beyrout, 40
Cadiz, 75
Calcutta, 25
Callao, 50 cs.
Cape Haitien, 4
Cartagena, S.A., 22
Cienfuegos, 1
Colon, 6
Curacao, 53 62 pkgs.
Demerara, 40
Genoa, 7 cs. 40 4 dms
Gibraltar, 26 pks. 10 bgs.
Gothenburg, 30

Guantanamo, 2
Hamburg, 3 dms. 6 . 11 20
Havana, 2
Havre, 70 185 20 cs.
Hong Kong, 40
Iloilo, 14 2
Kotonon, 55
Lagos, 116
Leghorn, 1
Lisbon, 37
Malta, 2 dms.
Manilla, 8 750 20
Maranham, 3 7
Para, 50 dms. 8
Port Said, 200
Progresso, 6
Rio de Janeiro, 21 35
St. John's, Nfld., 10 1
St. Croix, 51
Sierra Leone, 383 10 dms.
Syra, 4
Trinidad, 4
Valparaiso, 30

Painters Colours—
Alexandria, 55 cks 240 kgs.
Antwerp, 15
Aracaju, 7 pks. 1 cs.
Bahia, 6 brls. 28
Baltimore, 2
Belize, 10 59
Bolama, 75 dms. 5
Bordeaux, 1 bx.
Brass, 1
B. Ayres, 7 cs. 145 80 120 crts.
Cape Town, 20 cs.
Galatz, 170
Montreal, 11
N. York, 2 brls. 21 79 2
Oporto, 12
Para, 101 dms 9 89 2
Pisagua, 124
Ponce, 8 brls.
Portland, O., 86
Rangoon, 100 bgs.
Rio Grande, 4 brls. 2 1
St. John's, Nfld, 73 dms
Santos, 4
Sierra Leone, 40 brls. 30
Syra, 10
Trieste, 100 bgs.
Valencia, 1
Yokohama, 3

Paraffin Wax—
Ancona, 50 bgs.
Para, 25 cs.
San Sebastian, 50

Phosphorus—
B. Ayres, 14 c. 2 q. £110
M. Video, 14 2 110
Yokohama, 4 t. 16 1,190

Potash—
Bombay, 10 c. £30

Potassium Bicarbonate—
New York, 4 c. £9

Potassium Bichromate—
Pernambuco, 5 c. 1 q. £16
Syra. 10 1 23
Seville, 11 3 26
Philadelphia, 5 t. 3 3 180

Potassium Chlorate—
Corunna, 1 t. £35
Antwerp, 1 40
Libau, 10 c. 19
Pernambuco, 15 39
Sydney, 8 312
Trieste, 1 40
Gothenburg, 2 10 97
Carril, 1 4 46
Calcutta, 1 38
Tampico, 5 20
Hiogo, 15 552
Naples, 3 113
Rotterdam, 2 19 77
Hong Kong, 1 5 48
Philadelphia, 5 198
St. Petersburg, 38 5 1,379
New York, 36 5 1,370

Salt—
Aarhuus, 300 t.
Accra, 5
Antwerp, 36 16 c.
Appam, 6 5
Bahia, 1 2
Banana, 11
Barbadoes, 250
Boston, 753 3
Calcutta, 725
Cameroons, 32 17
Corunna, 2
Demerara, 89
Dunedin, 116
Flensburg, 301 11
Fuca, 20
Galveston, 367
Ghent, 230
Gd. Labou, 25
Halifax, 90
Iquitos, 48 10
Lagos, 220
Laurvig, 150
Lucea, 1 17
Manaos, 17 17
Melbourne, 30
Montreal, 1,138
Muculla, 11
N. Orleans, 915
Newport News, 250
New York, 100
Noque, 20
Opobo, 4
Para, 200
Quebec, 33
Rangoon, 2,411
Rosario, 34
Rotterdam, 209
St. John's N'fd., 5
St. Petersburg, 38 3
Salt Pond, 12 10
Shanghai, 395
Sydney, 100
Trinidad, 33
Wellington, 195

Salt Cake—
Delagoa Bay, 30 t. 2 c. £76
Lisbon, 6 5 12
Antwerp, 135 14 179

Saltpetre—
Pernambuco, 3 c. £9
Ceara, 14 3 q. 17
M. Video, 10 11
Lisbon, 4 3 5
Maranham, 1 t. 13 1 41

Sheep Dip—
B. Ayres, 42 t. 19 c. £997
Belize, 10 dms. 6

Soap—
Accra, 250 hhs.
Adelaide, 400 cs.
Alexandria, 13 brls.
Algoa Bay, 841
Antigua, 200
Appam, 120
Assinee, 100
Baltimore, 40 9
Barbadoes, 50
Barcelona, 1
Bilbao, 3 cks.
Bombay, 30
Brunswick, 30
B. Ayres, 40 kgs.
Calcutta, 10
Canaries, 475
C. C. Castle, 100 1
Cape Town, 200
Cartagena, S.A., 4
Curacao, 175
Delagoa Bay, 801 6 bdls.
Demerara, 1,885
E. London, 2,673 105
Genoa, 20
Ghent, 60
Guayaquil, 200
Havre, 500
Hong Kong, 3 40 dms.
Karachi, 15
Kotonon, 20
Lagos, 130 1
Macassar, 1,500
Madras, 11
Malta, 70
Manaos, 440
Manila, 1
Menano, 2,500
Montreal, 1
N. Orleans, 100
New York, 55 581
Panama, 300
Penang, 30
Palma, 54
Parnahyba, 100
Kingston, 1,660 1
Pt. Elizabeth, 260 50
Pt. Natal, 161 12
Quebec, 1
Rangoon, 1
Rotterdam, 500
St. John's, N'fd., 135
Santos, 27
Sierra Leone, 84 82
Singapore, 125
Teneriffe, 1,006
Valparaiso, 1

Soda Alkali—
Barcelona, 70 brls.
Melbourne, 40
Sydney, 35
Zante, 20

Soda Ash—
Adelaide, 133 cks.
Antwerp, 1,300 bgs.
Boston, 64 19 cs. 1,280
B. Ayres, 50
Gothenburg, 59 252
Hamburg, 10 500
Hiogo, 111
Kingston, 15
Lisbon, 20
Manaos, 3 brls.
Maranham, 30
M. Video, 150
Montreal, 39 cs. 100
Naples, 100
New York, 140 1,480
Philadelphia, 221 3,000
Puerto Cabello, 12 kgs.
Riga, 28
Rio de Janeiro, 50 brls. 50
San Francisco, 50
Sourabaya, 10
Syra, 50
Venice, 120 bgs.
Vera Cruz, 5
Rotterdam, 4 384

Soda Crystals—
Boston, 280 brls.
Calcutta, 20 33 kgs.
Demerara, 30
Kingston, 4 cks.
Lisbon, 4
Malaga, 5 26 20
Malta, 50
Montreal, 100 160 bgs. 215
New York, 140
Oporto, 12 brls.
Rosario, 33
Tangiers, 10
Valparaiso, 21

Sodium Arseniate—
Antwerp, 2 cks.
Bombay, 10

Sodium Bicarbonate—
Alexandria, 8 cks. 90 brls.
Alicante, 15 25 kgs.
Antwerp, 10 158
Barcelona, 4 150
Bilbao, 50
Boston, 175
Calcutta, 750
Copenhagen, 2
Corunna, 2 20
Delagoa Bay, 15
Demerara, 20
Dunedin, 50
Hamburg, 16 15
Havre, 34
Madras, 25
Malaga, 50
Malta, 30 bgs.
Montreal 10 50 1,175
New York, 10 brls. 20
Palermo, 4
Paris, 90
Portland, Or., 50
Pt. Natal, 100
Quebec, 350
Riga, 1,145
St. Petersburg, 200
Salonica, 10
San Francisco, 100
Santander, 65
Seville, 100
Sourabaya, 5 20
Tripoli, 40
Vancouver, 3
Victoria, B. C., 6

Sodium Carbonate—
Bahia, 20 bgs.
Boston, 56 brls.

Sodium Chlorate—
Genoa, 4 brls.
Hamburg, 10 kgs.
St. Petersburg, 100
Vera Cruz, 8 cks. 8

Sodium Hyposulphite—
Callao, 40 kgs.
Melbourne, 50
New York, 5
Rotterdam, 1 ck. 20
Savanilla,

Sodium Silicate—
Adelaide, 60 cks.
Barcelona, 32
Bilbao, 36
Freemantle, 10
Leghorn, 73
Melbourne, 40
Philadelphia, 11

Sodium Sulphate—
St. Petersburg, 200 kgs.

Sulphur—
Maranham, 11 c. 2 q. £4
Boston, 150 t. 6 489
Halifax, 70 1 256
Savanilla, 7 1 6

Sulphuric Acid—
Callao, 1 t. 9 c. £98

Varnish—
Genoa, 1 cs.
Leghorn, 3 pks.
Manila, 1
Smyrna. 20 dms.
Valparaiso, 5

White Lead—
Callao, 1 cs.
Halifax, 35 kgs.

MANCHESTE

Week ending September 3

Alum—
Bombay, 72 cks.
Jaffa, 5

Ammonium Carbonate—
Antwerp, 20 kgs.
Rotterdam, 2 cks.

Aniline Colours—
Barcelona, 3 cks.
Rotterdam, 7 3 cs. 4 l

Aniline Oil—
Rotterdam, 4 dms.

Aniline Salts—
St. Petersburg, 14 cks.

Antimony—
Bombay, 2 cks.

Benzoline—
Rotterdam, 23 cks.

Creosote Oil—
Alexandria, 50 cks.

Glue—
Rotterdam, 10 cks.

Naphthol Salts—
Barcelona, 8 cks.

Soap—
Hamburg, 2 pns.

Sod a Ash—
Beyrout, 13 brls.

Sodium Sulphate—
Bombay, 50 bgs.

Tar Salts—
Hamburg, 48 cks.
St. Petersburg, 64 bgs.

Toluol—
Rotterdam, 30 dms.

Zinc Chloride—
Barcelona, 23 cks.

HULL.

Week ending September 26

Alkali—
Danzig, 93 cks. 100 cs.
Trieste, 5
Wyburg, 132

Ammonium Sulphate—
Dunkirk, 576 bgs.

Benzol—
Amsterdam, 9 dms.
Rotterdam, 24 brls.

Bleaching Powder—
Danzig, 123 cks.
Dunkirk, 36
Gothenburg, 44
Norrkoping, 19
Riga, 53
Trieste, 44

Caustic Soda—
Abo, 130 cks. 33 dms.
Bari, 20
Christiania, 1
Danzig, 63
Harlingen, 18
Helsingfors, 107 90
Riga, 42 643
Stettin, 10
Wyburg, 24
Wasa, 92

Chemicals (*otherwise unde*
Antwerp, 19 cks. 3 cs.
Amsterdam, 10 bbls.
Abo, 13
Bergen, 362 slbs. 22 pks.
Bremen, 120
Christiania, 3 cks. 8
Copenhagen, 12

nzig, 2 brls. 7 20
henburg, 1
ent, 10
mburg, 17 30
lsingfors, 3 1
nigsberg, 16 1 2
au, 5
terdam, 64
a, 3 344
en, 10
Petersburg, 4
ckholm, 7
aborg, 25
ice, 5
burg, 10
sa, 5 40

a Clay—
a, 202 bgs.

onseed Oil—
werp, 817 c.
sterdam, 824
deaux, 100
enhagen, 200
skirk, 101
me, 88
henburg, 68
mburg, 843
rlingen, 100
igsberg 131
terdam, 25
tin, 615
ckholm, 50

tuffs *(otherwise undes.)—*
, 1 ck.
istiania, 100 bgs.
nzig, 3 cs.
mburg, 2
ngo, 4
Petersburg, 5
—
nt, 9 cks.
mburg, 10 bgs.

eed Oil—
werp, 459 c.
sterdam, 170
xandria, 16
deaux, 36
gen, 35
men, 8
istiania, 656
enhagen, 234
ntheim, 194
nburg, 624
ice, 18

ure—
skirk, 88 t.

ntha—
enhagen, 4 dms

ters' Colours—
werp, 52 cks. 5 cs. 4 dms.
sterdam, 24
, 75 5
, 5
deaux, 12
gen, 2
istiania, 1 42 pks.
enhagen, 31 3 9 dms.
ntheim, 11
skirk, 2 1 3 brls.
me, 6
henburg, 25
nt, 2 1
nburg, 16
singfors, 155 3
York, 79
terdam, 1
en, 3
tin, 16 1
ckholm, 37
este, 24
aborg, 25

phate—
tin, 190 t.
—
werp, 190 t.
—
istiania, 1 cs.
henburg, 1

ow—
sterdam, 116 cks.
skirk, 55
sa, 53
—
sterdam, 5 cks
gen, 2
nzig, 5 brls.
henburg, 3
mburg, 5
nigsberg, 3
aborg, 30

icle—
, 15 cks.

Turpentine—
Antwerp, 12 dms.
Alexandria, 2 brls.

Varnish—
Antwerp, 3 cks. 4 dms.
Amsterdam, 2 cs.
Gothenburg, 2
Hamburg, 1
Stettin, 12 1 pk.

GLASGOW.

Week ending October 1st.

Albumen—
Lisbon, £56

Alkali—
Otago, 7 t. 8¼ c.

Ammonium Carbonate—
Drontheim, 5 kgs.
Stavanger, 4

Ammonium Sulphate—
Genoa, 106 t. 4¾ c.
Demerara, 57 4¾
Nantes, 39 17¾
Rouen, 51 8½
Trinidad, 16 4
Bordeaux, 10 1½
Hamburg, 60

Asbestos—
Algoa Bay, £25

Bleaching Powder—
Melbourne, 24 t. 3 c.
U.S.A., 7 4
Rouen. 6 ¾
Dunedin, £26

Caustic Soda—
U.S.A., 43 t. 2 c.
Rouen, 5 9
Auckland, 1 5

China Clay—
Bahia, 8 t. 8¼ c.

Coal Products—
Aniline Dyes
Calcutta, £71
Creosote
France, £350
Creosote Oil
France, £275
Hamburg, 5 t. 15 c.
Naphtha
France, £47
Pitch
Calcutta, £75
Canada, 217
Genoa, 532
,, 49 t. 9 c.
Hamburg, 27 10
Tar
Calcutta, £38
Colombo, 55
Madras, 41
Singapore, 26
Christiania, 25 cks.
Rotterdam, 12¾ c.

Copper Sulphate—
Rouen, 19 t. 16½ c.

Dyestuffs *(otherwise undescribed)*
Pt. Lyttelton, £37

Extracts—
Victoria, £141

Gelatine—
Canada, £73
Auckland, 42
Dunedin, 34

Glucose—
Canada, 2 t. 11 c.
U.S.A., 3

Iodine—
Rotterdam, 10 c.

Linseed Oil—
Kingston, 10 t. 6½ c.
Melbourne, 1
Hong Kong, 1 4
Lisbon, 2 3½
Mauritius, 2 3
Christiania, 3
Canada, 27 14¼

Litharge—
Stockholm, 5 cks.

Logwood—
Canada, £34
Lisbon, 28
Pt. Lyttelton, 100

Manure—
Genoa, 19 t. 14 c.

Ochre—
Canada, £39. 18s.

Paint—
Colombo, £126
Havana, £136. 10s.
Melbourne, £35
Calcutta, 61
Hiogo, 23
Johannesburg, 25
Shanghai, 103
Singapore, 153
Kent Ville, 36
St. John's, N'fd., 318

Painters' Colours—
Calcutta. £32
Cape Town, qty.
Mauritius, ,,
Yokohama, £33. 10s.
Auckland, ,,
Canterbury, £183
Montreal, 78
Wanganui, ,,

Paraffin Wax—
Stockholm, 50 cks.
Bombay, £22

Potash Salts—
Canada, 11 c.

Potassium Bichromate—
Genoa, £998
U.S.A., 909
Victoria, 63
Rouen, 892
,, 8 t. 11 c.

Potassium Prussiate—
Amsterdam, 8 c.

Rosin Oil—
Amsterdam, 25 brls.

Sheep Dip—
Dunedin, £493
The Bluff, 155

Soap—
Adelaide, 1 t. 14¼ c.
Pt. Louis, 5
St. Denis, 4 11
Bombay, 1 7

Sodium Bichromate—
Genoa, 40 t. 7¾ c.
U.S.A., 11 3½

Tar Oil—
Hamburg, 5 t.

Treacle—
Bergen, 2 t. 13 c.
Algoa Bay, 2 10
Christiania, 44 10
Stockholm, 13 10

Varnish—
Bombay, £80

White Lead—
Colombo, £26

Zinc Ashes—
Rotterdam, 2 t. 15½ c.

TYNE.

Week ending September 26th.

Alkali—
Hamburg, 5 t. 18 c.
Rotterdam, 6 4
Bergen, 2 15
Riga, 133 6

Ammonium Carbonate—
Halmstad, 2 t. 2 c.

Ammonium Chloride—
Riga, 10 c.

Ammonium Sulphate—
San Francisco, 50 t.

Antimony—
Bergen, 8 c.
Antwerp, 1 t.
Gothenburg, 10
Hamburg, 1
Rotterdam, 2

Asbestos—
Bergen, 16 q.

Barium Binoxide—
Rouen, 10 t. 2 c.

Bleaching Powder—
Antwerp, 10 t. 4 c.
Bilbao, 10
Gothenburg, 5 2
Hamburg, 33 1
Rotterdam, 25 16
Copenhagen, 23 19
Aalborg, 1 2
Bergen, 1 6
Drontheim, 9 19
Riga. 50 7

Caustic Soda—
Antwerp, 14 t. 14 c.
Bilbao, 10 3
Rouen, 2 6
Hamburg. 51 18
Copenhagen, 2 18

Coal Products—
Naphthaline
Riga. 25 t. 6 c.
Pitch
Riga, 6 t. 10 c.

Lamp Black—
Rotterdam, 1 t. 17 c.

Litharge—
Gothenburg, 1 t. 9 c.
Riga, 20 5

Magnesia—
Hamburg, 2 c.

Manure—
Genoa, 7 t. 5 c.

Paint—
Antwerp, 11 c.
Bilbao, 1 t.
Hamburg, 1
Copenhagen, 7

Saltpetre—
Aalborg, 5 t.

Soap—
Drontheim, 2 t. 1 c.

Soda—
Bilbao, 4 t. 12 c.
Rotterdam, 6 8
Aalborg, 3 4
Odense, 10 9
Salonica, 15 2
San Francisco, 21 11

Soda Ash—
Helgenas, 20 t. 13 c.
Gothenburg, 30 6
Bergen, 6

Sodium Sulphate—
Helgenas, 260 t.
Surte, 160
Antwerp, 50 2 c.
Skutskar, 1,250

Sulphur—
Gothenburg, 80 t.
Riga, 125

Superphosphates—
La Rochelle, 831 t. 3 c.

White Lead—
Bergen, 2 t. 7 c.

Zinc Ashes—
Rotterdam, 3 t. 5 c.

GOOLE.

Week ending September 23rd.

Alkali—
Ghent, 6 cks.

Benzol—
Boulogne, 55 cks.
Dunkirk, 1
Hamburg, 24
Rotterdam, 97 17 dms.

Chemicals *(otherwise undescribed)*
Rotterdam, 18 cks.

Coal Products *(otherwise undes.)—*
Amsterdam, 5 cks.
Antwerp, 71
Boulogne, 53 3 cs.
Ghent, 6
Rotterdam, 232 3

Colours—
Boulogne, 3 cs.
Rotterdam, 4

Dyestuffs *(otherwise undescribed)*
Ghent. 5 cks. 1 cs.
Hamburg, 40 60 bgs.

Pitch—
Antwerp, 743 t.

GRIMSBY.

Week ending September 26th.

Chemicals *(otherwise undescribed)*
Hamburg, 10 btls.
Malmo, 15 cks.

Coal Products *(otherwise undes.)—*
Dieppe, 5 cks. 1 dm.
Hamburg, 10
Rotterdam, 53

Colours—
Antwerp, 3 cks. 1 cs.
Dieppe, 1
Hamburg, 3
Rotterdam, 3

Dyestuffs *(otherwise undescribed)*
Dieppe 5 cks.

Manure—
Antwerp, 51 t.

PRICES CURRENT. WEDNESDAY, OCTOBER 7TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:—			
Acetic, 25 % and 40 % per cwt.	5/10½ &		8/9
,, Glacial per cwt.		40/-	
Arsenic S.G., 2000° per cwt.	1	2	0
Fluoric per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. per bottle	0	0	10
,, (Cylinder), 30° Tw. ,,	0	3	0
Nitric 80 Tw. per lb.	0	0	1⅝
Nitrous ,,	0	0	1¼
Oxalic nett ,,	0	0	3½
Phosphoric, 1750° ,,	0	0	11½
Picric ,,	0	0	1(
Sulphuric (fuming 50 %) per ton	15	10	0
,, (monohydrate) ,,	5	10	0
,, (Pyrites, 168°) ,,	3	0	0
,, ,, 150° ,,	1	5	0
,, (free from arsenic, 145°) ,,	1	7	6
Sulphurous (solution) S.G. 1025 ,,	3	0	0
Tannic (pure) per lb.	0	1	2½
Tartaric ,,	0	1	2¾
Arsenic, white powdered nett per ton	22	0	0
Alum (loose lump) ,,	4	10	0
Alumina Sulphate (pure) ,,	4	12	6
Aluminoferric ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) nett per ton	155	0	0
Ammonia, Anhydrous ,,	0	1	4
,, ·880=28° B. per lb.	0	0	2¾
,, =24° B. ,,	0	0	1¾
,, Carbonate nett ,,	0	0	3
,, Muriate per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd per cwt.	37/-&		35/-
,, Nitrate per ton	33	0	0
,, Phosphate per lb.	0	0	4½
,, Sulphate (grey) London per ton	7	10	0
,, ,, (grey) Hull ,,	7	8	9
Aniline Oil (pure) per lb.	0	0	10½
Aniline Salt ,, ,,	0	0	9½
Antimony per ton	29	5	0
,, (tartar emetic) per lb.	0	0	9¼
,, (golden sulphide) ,,	0	0	10
Barium Chloride per ton	7	0	0
,, Carbonate (native) ,,	3	10	0
,, Sulphate (native levigated) ,,	42/6 to 65/-		
Bleaching Powder, 35 % nett ,,	6	12	6
,, Liquor, 7 % ,,	3	10	0
Bisulphide of Carbon ,,	14	10	0
Chromium Acetate (crystal) per lb.	0	0	6
Calcium Chloride per ton	2	2	6
China Clay (at Runcorn) in bulk ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % nett per lb.	0	0	7
Magenta ,,	0	3	9
Anthracene, 30 % A, f.o.b. London per unit per cwt.	0	0	9¼
Benzol, 90 % per gallon	0	4	9
,, 50/90 ,,	0	3	4½
Carbolic Acid (crystallised 40°) per lb.	0	0	6½
,, (crude 60°) per gallon	0	1	9
Creosote (ordinary) ,,	0	0	1
,, (filtered for Lucigen light) ,,	0	0	1¾
Crude Naphtha 30 % @ 120° C. ,,	0	1	3
Grease Oils, 22° Tw. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston ,,	1	11	0
Solvent Naphtha, 90 % at 160° per gallon	0	1	6
"Lucigen" and "Wells" Oils ,,	0	0	0
Copper per ton	47	7	6
,, Sulphate ,,	16	0	0
,, Oxide (copper scales) ,,	42	10	0
Glycerine (crude) ,,	40	0	0
,, (distilled S.G. 1250°) ,,	75	0	0
Iodine nett, per oz.	0	0	9
Iron Sulphate (copperas) per ton	1	10	0
,, Sulphide (antimony slag) ,,	2	0	0
Lead (sheet) for cash ,,	12	10	0
,, Litharge Flake (ex ship) ,,	14	10	0
,, Acetate (white ,,) ,,	22	0	0
,, ,, brown ,,) ,,	14	15	0
,, *Carbonate (white lead) pure* ,,	16	0	0
,, *Nitrate* ,,	18	10	0
Lime, Acetate (brown) (ex ship) per ton	4	5	0
,, ,, (grey) (ex ship ,,	8	0	0
Magnesium (ribbon and wire) per oz.	0	2	
,, Chloride (ex ship) per ton	2	7	6
,, Carbonate per cwt.	1	17	6
,, Calcined Magnesia per ton.	8	15	0
,, Sulphate (Epsom Salts) per ton	2	15	0
Manganese, Sulphate ,,	16	10	0
Borate per cwt.	2	10	0
,, Ore, 70 % per ton	3	10	0
Methylated Spirit, 61° O.P. per gallon	0	1	8
Naphtha (Wood), Solvent ,,	0	2	7
,, ,, Miscible, 60° O.P. ,,	0	2	8
Oils:—			
Cotton-seed per ton	16	5	0
Linseed ,,	18	10	0
Petroleum, American per gallon	0	0	7
Stearine per ton	20	10	0
Phosphorus (yellow) per lb.	0	2	2
,, (red) ,,	0	2	8
Potassium (metal) per oz.	0	3	7
,, Bichromate nett per lb.	0	0	4¾
,, Carbonate, 90% (ex ship) per ton	17	15	0
,, Chlorate ,, per lb.	0	0	4
,, Cyanide, 98% ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % ,,	19	10	0
,, Nitrate (refined) per cwt.	1	1	6
,, Permanganate ,,	3	17	6
,, Prussiate Yellow per lb.	0	0	6¼
,, Sulphate, 90 % (ex ship per ton	9	15	0
,, Muriate, 80 % (do.) ,,	8	10	0
Silver (metal) per oz.	0	2	6
Sodium (metal) per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% ,,	4	0	0
,, ,, (Alkali) 58 % ,,	3	10	0
,, ,, (Soda Crystals) ,,	2	0	0
,, Acetate (ex-ship) ,,	14	7	6
,, Arseniate, 45 % ,,	14	10	0
,, Chlorate per lb.	0	0	4¾
,, Borate (Borax) net, per ton.	18	0	0
,, Bichromate per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net per ton	9	5	0
,, ,, (74 % Caustic Soda) ,, ,,	8	5	0
,, ,, (70 % Caustic Soda) ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate ,,	6	10	0
,, Hyposulphite ,,	5	5	0
,, Manganate, 25 % ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool per cwt.	0	7	9
,, Nitrite, 98 % per ton	30	0	0
,, Phosphate ,,	12	10	0
,, Silicate (glass) per ton	4	10	0
,, ,, (liquid, 100° Tw.) ,,	3	10	0
,, Stannate, 40 % per cwt.	3	2	6
,, Sulphate (Salt-cake) per ton.	0	19	0
,, ,, (Glauber's Salts) ,,	1	10	0
,, Sulphide ,,	6	15	0
,, Sulphite ,,	5	0	0
Strontium Hydrate, 100% ,,	3	0	0
Sulphocyanide Ammonium, 95 % per lb.	0	0	6½
,, Barium, 95 % ,,	0	0	4¾
,, Potassium ,,	0	0	6¾
Sulphur (Flowers) per ton.	7	0	0
(Roll Brimstone) ,,	6	5	0
,, Brimstone: Best Quality ,,	4	12	6
Superphosphate of Lime (26% ,,	2	15	0
Tallow ,,	18	10	0
Tin Crystals per lb.	0	0	4½
,, English Ingots per ton	60	10	0
Zinc (Spelter) ,,	17	0	0
,, Chloride (solution, 100° Tw.) ,,	5	2	6

THE

CHEMICAL TRADE JOURNAL

AND

OIL, PAINT and COLOUR REVIEW.

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AN EXCUSE FOR PESSIMISM.

IN criticising recently the progress that has been made in chemical sewage treatment we were not able to speak very flatteringly, although we were careful to cite the existing exceptions to the general conclusion we arrived at.

It may have been thought by many that we were rather too hard on the average patented sewage process, but the best way to disabuse the minds of our readers will be to deal somewhat fully with one of the many recent inventions in connection with the treatment of sewage. In the following this has been done, and it will, we think, condone for any attack of pessimism we may have suffered from. The humour of it has been appreciated by us from the first, and it is the aspect in which we prefer to finally view such inanities.

To begin with, it must be clearly understood that the process has been selected with a view to emphasizing very strongly the utter futility of many of the ideas and suggestions that cumber the ground, on which more fruitful proposals might grow. It is not our wish to suggest that the majority of what may be classed as "feeble" processes are so outrageously impracticable; they are fortunately only capable of reflecting faintly the fu glory of wasted energy with which our example gleams resplendent.

The process, on paper, does not seem so very impracticable until you begin to go into the cost, which, within certain limits, is the *crux* of the whole question. A clarifier composed of clay and carbonaceous matter is used in conjunction with a small dose of benzoic acid and alum cake. It is stated that the benzoic acid is used whenever the sewage is alkaline. Our experience of sewage, therefore, teaches us that it is safe for genera purposes to assume that benzoic acid will be the re-agent in requisition, and the use of benzoates can be ignored.

For the treatment process, from 5 to 20 grains of both benzoic acid and alum cake are named as probable and suitable proportions. We are not going to take the cost of the clarifier into account at all. Moreover, so as to give the whole thing as good a chance as possible, the *minimum* quantity of 5 grains per gallon will be taken as the basis of the calculations that follow.

If the inventor were to be interviewed, we do not think there would be any difficulty in drawing forth the information that his aim and hope was to solve, or very largely help to solve, the sewage problem as a whole. We may, therefore, fairly take the case of a large borough such as Salford to illustrate the application of the process

At the computation of 5 grains to a gallon, one pound of benzoic acid would treat 1,400 gallons of sewage. As the volume of the Salford sewage is ten million gallons daily, this means 7,143 pounds of benzoic acid per diem. The quotation for this acid in the list of a large and well-known firm of chemical merchants is 2s. 3d. to 9s. 6d. per pound.

Taking the lowest price, and allowing about 10 per cent. discount for buying in bulk, we shall fix the price at the round sum of 2s, which figures out to £714. per day. Again, allowing about 15 per cent. discount off the current price of the alum cake, we shall, for the sake of simplicity, fix the price at £2. per ton. For the same reason, a further safe margin in favour of the process will be left, and the 7,143 pounds taken as 3 tons, or £6. per day. Working these figures out for the year, we arrive at a nice little sum, which, considering the liberal discounts allowed, and the minimum quantities assumed, may honestly be saddled with the extra £200, which are needed to bring the sum total of the cost of chemicals to £263,000. per year. In the case of Manchester, this would mean £394,000. a year, when allowance has been made for the increased quantity of sewage to be dealt with.

In the face of this it must be remembered that this is a very low estimate, and that 20 grains, or four times as much as we have calculated on, may be required, while the inventor carefully avoids limiting himself in the matter of quantity either way. But he could not require much less than 5 grains, and he might require a lot more than 20, a possibility which means a sum total too colossal to contemplate.

Now science has so far helped in the sewage question that Manchester sewage can actually be treated at an inclusive cost of just over £11,198. a year. Is it any wonder, therefore, that the solution of the problem does not progress, when the gentleman and his company who conjointly are responsible for this truly amusing process are capable of patenting such a notion, and continue to roll out other patents by the dozen.

To finally emphasize the glaring futility and worthlessness of this process, it is only necessary to point out that the benzoic acid alone must be obtained at 1½d. per pound (to the exclusion of any consideration of the cost of labour and the clarifier) if the process is to do as well as can be done day by day at this very present. It is progression we want, not retrogression or even mediocrity.

THE SCIENTIFIC EDUCATION GRANT.

SPEAKING at the opening of the twenty-sixth session of the Durham College of Science, Newcastle-on-Tyne, last week, Sir M. White Ridley (Home Secretary) said that during the last twenty-five years the necessity and utility of the College had been amply demonstrated, especially in connection with the enormous development of the industries of the district which had taken place during that period. A simple definition of technical education was instruction in the principles of arts and sciences as applicable to our industries. The growing complexity of our industries, and the greater necessity of every manager and every workman having a more accurate knowledge of science, called for the existence of such colleges, and there was on the other side a growing demand for secondary and University education which arose from the spread of elementary education. He hoped the signs of the times pointed to the development of the system of secondary education, the clear distinction of it from elementary education, and the establishment of it upon sound principles. He also remarked upon the success of the University Extension movement. They had heard, he said, that day that the Chancellor of the Exchequer was sending certain persons to discover whether it would be wise to increase the Government grant to University colleges of science. He would not venture to say anything authoritatively or unauthoritatively as a colleague of the Chancellor of the Exchequer that would raise any hopes; but he was confident he could assure the Chancellor of the Exchequer that if he should find it possible to increase the grant which the State now gave to the University colleges of science throughout England—not forgetting the principal of them all, the Durham College of Science he would be amply and satisfactorily supported by public opinion. It was never more necessary that the various professions and industries should receive the benefits of special scientific education. He urged that character should not be left out of view while special studies were being pursued, and said it was not from the natural advantages of any district, great as they might be, that that district would derive the greatest and most lasting benefits, but from the character and work of the men who lived in it. The men were those who made a city, and not the walls and buildings within it. Referring to the agricultural department of the college, he said that, serious as was the agricultural distress that existed, their trade resources and the courage and energy of their local population had faced the emergency with more success than had been the case elsewhere.

CARBORUNDUM IN STEEL MAKING.

IT is proposed by Herr F. Lürmann that carborundum (silicon carbide) should be employed as a source of silicon in the manufacture of steel. Among certain makers and users of steel of tolerably hard grade, such as that commonly used for railway tyres, there has been lately an alteration of opinion in favour of silicon as a desirable constituent. Many, however, still maintain that it is an objectionable impurity. The discussion of this question is not our immediate purpose, and it is sufficient to say here that there exists a considerable demand for steel containing about 0·2 per cent. of Si. To produce steel of this quality, the addition of ferro-silicon is generally adopted. Ferro-silicon is made with a content of about 11 per cent. of silicon, and its price is 78 marks for 1,000 kilos., *i.e.*, about £4. per ton. It is, of course, necessary that ferro-silicon used in the production of steel castings should be free from harmful impurities, *e.g.*, phosphorus, and indeed this element is usually present in proportion not greater than 0·1 per cent., so that the increase in the percentage in the finished steel ingot is inappreciable. Assuming that the value of the steel before treatment is 67 marks for 1,000 kilos, and that a product containing 0·2 per cent. of silicon is required, a simple calculation shows that the extra cost due to the addition of ferro-silicon is 2 marks for a 10-ton charge, *i.e.*, approximately 2½d. per ton.

Now it is clear that if silicon carbide is to replace ferro-silicon as a source of silicon in steel castings, it is necessary to show either that its use is cheaper or that it presents independent advantages. It may first be noted that an actual trial has been made, as long ago as November, 1894, at the Phœnix works at Laar, and that nearly pure silicon carbide (containing 67·5 per cent. of Si and 32 per cent. of C) has been proved to be soluble in molten steel. It is also of some commercial importance to find that a subsequent attempt to patent the use of silicon carbide for the deoxidation of oxides contained in ingot iron or steel has been frustrated by the decision of the German Patent Office. With regard to the cost of silicon carbide, a simple calculation indicates that for the production of steel containing 0·2 per cent of Si. at the same expenditure as is necessary when ferro-silicon is employed, the carbide must be obtainable for 54·3 pfennige per kilo—say 3d. per pound. Against this somewhat onerous condition for the success of the new material, must be set the fact that silicon carbide can be introduced into the steel precisely when and how it is required, and moreover that it is free from impurities likely to be injurious to the steel. That a considerable trade in silicon carbide might arise if the steel maker were persuaded that it would be better than ferro-silicon for this purpose, is evident on considering that the consumption of ferro-silicon for a steel works of moderate size may be set down as 1,440 tons, and that, counting the number of works in Germany using the open-hearth basic process, the total consumption would reach 15,000 tons, corresponding with 2,444 tons of SiC. This represents the substantial sum of 1,327,092 marks, *i.e.*, £66,000.

Silicon carbide, for use as a grinding material, is a highly crystalline substance, which has presumably undergone fusion; it is possible enough that the substance may be formed at a temperature somewhat lower than that necessary to melt it and cause it to crystallise. In this case the cost of manufacture would be sensibly reduced; and, seeing that the product of an electric furnace is always highly heterogeneous, it is reasonable to suppose that amorphous SiC, unfitted for abrading purposes, may be found a profitable bye-product as a carburetting and siliciding agent. Carbides, silicides, nitrides and borides of manganese, magnesium and aluminium, suggest themselves as possible products for the common profit of the steel-maker and the electro-metallurgist, and some at least among them may come to be ordinary articles of commerce before the end of the century.—*Zeit. für Electrochemie.*

River Pollution by Sheep-Washing.—The Driffield Rural District Council recently considered a report of the medical officer of the district, to the effect that sheep-washing was a source of pollution to the stream which has its rise at Wharram, and runs through Duggleby, Kirbygrindalythe, down to Helperthorpe, Weaverthorpe, and other villages. During the season about 1,000 sheep are washed in the stream, and the process occupies a month. In some instances the water has been so polluted that young ducks are said to have been killed. It was decided to write to the Malton authorities, to ascertain what they were doing in the matter, so that combined action might be taken.

The Patent List.

list is compiled from Official sources in the Manchester Laboratory, under the immediate supervision of . Davis and Alfred R. Davis, who report professionally value of Chemical Patents.

LICATIONS FOR ENGLISH LETTERS PATENT.

Auriferous, Arsenical and Iron Sulphide Ores. J. W. Chenhall. September 28.

Sulphide Ores. J. Pullman. 21,428. September 28.

Dye. R. and F. Wilkinson. 21,431. September 28.

s for Producing Calcium Carbide. G. Webb, junr., and J. W. Kelley. September 28.

nsuming Appliance. E. Binns. 21,494. September 29.

Electrolyser. J. G. A. Rhodin. 21,509. September 29.

off the Sewage of Cities on Tidal Waters without Polluting the way. C. Thornhill. 21,522. September 29.

Calcium Carbide. M. P. E. Létang. 21,572. September 29.

the Waste from the Purification of Cottonseed and other able or Animal Oils. J. W. Hope. 21,604. September 30

Grease and Stains from Ivory. J. A. Skinner. 21,672. September

Paraffin Scale or Paraffin. H. Palmer. 21,682. September 30.

nd Apparatus for Concentrating Liquids. H. Boudoin and E. aux. 21,694. September 30.

Borates to obtain Boracic Acid. C. C. Moore. 21,764. October 1.

ting Apparatus. C. Winter. 21,771. October 1.

Apparatus for the Manufacture of Salt. J. J. Holleyhead. 21,892 r 2.

ients in Filter Presses. J. Williamson. 21,934. October 3.

ients in Manufacture of Copper Sulphate. T. Savage. 21,953. r 3.

m Alloys. A. L. de Redotte. 21,976. October 3.

RACTS OF LATEST COMPLETE SPECIFICATIONS.

bstracts are specially prepared for the Chemical Trade Journal, RIGHTS *of publication are* RESERVED. *This is the earliest abstracts of Chemical and allied patents accessible to the*

oved Apparatus for the Manufacture of Salt. A. R. Davis, ckfriars-street, Manchester. Eng. Pat. 19,692. October 19, 1895.

an application of the Porion principle to the evaporation of Smokeless products of combustion are passed through a ar chamber which is practically filled with a spray of brine, y a series of rapidly-revolving fanner blades partially dipping er of brine at the bottom of the chamber. Evaporating pans l on the top of the chamber to utilise the waste heat, in which ained salt can be obtained, or the brine heated before passing vaporating chamber. The bottom of this chamber is V-shaped, alt which falls out as the brine becomes concentrated, collects ottom, is removed by an endless conveyor to one end of aber, and there raised by a bucket elevator, and dis- into any suitable receptacle. If the salt requires special e elevator can be made to pass through a heated chamber. rnative ways of removing the salt are described. The bottom be made to slope to one side, and end in a trough outside the chamber, the salt being "fished" by hand, and the conveyor with, or the bottom is cone-shaped, with an external trough along each side. A simple device is provided which regulates y of brine, maintaining a constant level, so that with con- process becomes automatic. There are six figures.

ients Relating to the Separation or Extraction of Copper, Lead, Silver, Gold, and other Metals from Ores or Compounds ining the same, and to the Recovery of Chlorine used in the ment of such Ores or Compounds. H. R. Lewis, 7, Draper's- s, London, and C. Gelstharp, 211, Jubilee-terrace, Clayton, Manchester, Pat. 17,190. September 14, 1895.

basted ores are treated with chloride of iron or hydrochloric ed, and chlorine gas passed through. Either before or after, ne is passed through bleaching chambers to utilise the excess. ting solution of gold, silver, copper, zinc, or tin is passed over batch of ore, and the chlorine treatment repeated. The btained and the washings are electrolysed in suitable cells to e metals, while the chlorine given off is that used for chlorina- e earlier stage of the process. The residue is also smelted for ls it may contain. In treating gold slimes or tailings the edure is followed, but the gold is precipitated from the solution ic copper or zinc. The iron is removed by adding zinc or arbonate and the solution left electrolysed to recover the zinc or copper. There are two drawings showing the disposition of a convenient plant for executing the process.

Improvements Relating to Feed Hoppers for Alkali Furnaces and the like. F. H. Bowman, J. J. Howitt, J. Knowles, and T. A. Reid, all of Lostock Gralam, Northwich. Eng. Pat. 21,267. November 9, 1895.

A cylindrical meter-shaped casing is fitted to the mouth of the furnace, containing a number of revolving blades or vanes carried on a central horizontal shaft. In this way the cylindrical hood is divided into V-shaped segments, or compartments, each of which is charged in turn through a sliding door on the upper side. As the shaft is rotated by hand or by power, the charge is confined between the blades and the side of the cylindrical casing until it comes vertically over the mouth of the furnace, when the contents are discharged. It is claimed that by this arrangement no ammonia is able to escape or air allowed to enter. There are five diagrams.

IMPORTS AND EXPORTS FOR SEPTEMBER.

THE Board of Trade returns for last month do not present any very notable feature. There has been a falling off of 1·6 per cent. in the imports of chemicals and chemical products. The exports of alkali and salt show a decline in quantity of 26·5 per cent. and 31·5 per cent. respectively, compared with the same month of 1895. Seed oils and chemical manures are better, however, the latter by about 28 per cent.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.		Quantities. 1895.	1896.
Margarine	Cwt.	73,645	82,919
Copper Ore and Regulus	Tons.	15,150	16,389
Pyrites	,,	34,694	56,504
Tin	Cwt.	73,495	67,247
Alkali	,,	11,616	10,238
Brimstone	,,	21,764	42,804
Dyes, Coal Tar	£.	47,685	59,439
Saltpetre	Cwt.	17,136	24,671
Petroleum	Gall.	14,664,690	15,393,970
Turpentine	Cwt.	27,894	72,187
Guano	Tons.	7,160	1,396
Nitrate of Soda	,,	6,357	1,093
Paraffin	,,	54,181	78,4 0
Rosin	Cwt.	106,763	108,512
Tallow and Stearine	,,	104,500	97,281
Oil Seed Cake	Tons.	23,149	19,697
Wood Pulp	,,	29,000	28,912

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.		Quantities. 1895.	1896.
Alkali	Cwt.	519,068	381,326
Cement	Tons.	37,027	34,898
Coal and Coke	,,	2,981,367	2,914,758
Copper, all kinds	Cwt.	109,673	68,326
Iron and Steel	Tons.	269,346	314,736
Chemical Manures	,,	30,694	39,556
Oils, seed	,,	3,267	5,186
Salt	,,	67,527	46,253

NO WONDER AGRICULTURE IS DEPRESSED.—"Whilst the British farmer is clamouring for legislation to meet the alleged depression in agriculture, he is entirely neglecting such laws as have been passed in his behalf, such as the Fertilisers and Feeding Stuffs Act. That the uselessness of the Act is due entirely to neglect, and not to any want of power in the Act itself to cope with the evils it was passed to deal with, was convincingly shown by a test case just heard under it in Staffordshire. A fine of £34. 18s. was inflicted upon a dealer who had put upon the market a rubbishy compound, which analysed out as: nitrogen, 1·44 per cent.; insoluble phosphates, 8·94; potash, nil; and soluble phosphates, nil, and, calling it artificial manure, had charged £5. 10s. a ton for it. There are crowds of English farmers wasting their money upon equally worthless stuffs, farmers who, continually growling about depression and the necessity for Parliamentary help for their industry, apparently never dream of putting into force the effective remedy already provided by law." We congratulate the *Manchester City News*. It is the argument the technical press has been expounding for years. Hurry up with the next, please!

Reports of Companies.

THE WHITE LEAD CO., LTD.

At the recently held annual meeting of the shareholders of this company, whose works are at Possilpark, Glasgow, the report, which was published last week, was presented. The chairman, in moving the adoption of the report, apologised for its contents. He had no doubt that, having regard to the results, many would think he would be disposed to throw up the sponge, and not be inclined to devote any more money to carry on the works. That, however, was not his idea. He had determined from the first, if it were possible, to make the company a success, and he was still determined to persevere, more especially as he was encouraged to think that under the present management they were doing much better. They had excellent works and ample space, and there was no reason why, under good management, they should not have an ultimate success. Even independently of their special article of sulphate of white lead, or innocuous white, they could make paint colours and varnishes as well as anybody, and it was only necessary to obtain profit on them to make the company a success. The first cause of their depression was selling below cost price. They had been from time to time misled by sanguine reports as to what the cost price was. The second cause was the bad debts, which were out of all proportion to the amount of business transacted; and the third difficulty was in regard to the ore. The Spanish ore which they had obtained had a little iron in it which was thought to be detrimental, and not suitable for their particular process. Then, again, the valuation that was put upon their stocks had not turned out as well as was expected. Their new manager, Mr. Milne, was doing his best to remedy all these causes, and was now selling at a higher price than they previously obtained, and in spite of the opposition from their late manager and his new company, they had not lost orders except to a very small extent, and which, he had no doubt, they would recoup. Sir John Stokes seconded the adoption of the report, which was unanimously agreed to. Sir John Stokes was re-elected a director, and Messrs Carson and Watson, Glasgow, were re-appointed auditors. Mr. Salmond moved a vote of thanks to the chairman (Sir Henry Tyler), stating that they were greatly indebted to him for meeting all the difficulties which they had encountered in carrying on the business of the company. The chairman, in reply, hoped that they would next year meet them with a better report, not only for his own sake, but for the sake of the shareholders. The meeting then terminated.

RIO TINTO COMPANY, LIMITED.

The directors, in an interim report upon the company's operations during the current year, state that the deliveries of pyrites under existing contracts have continued to be satisfactory, and indicate an amount of consumption in excess of last year. The production of copper in precipitate and regulus at the mines, and of refined copper at Cwmavon, continues without interruption, besides which the cost has been further diminished. The directors have now to declare an interim dividend out of the estimated year's profits of 18s. per share, free of income tax, payable on November 2.

AFRICAN GOLD RECOVERY CO., LTD.

The directors of this company (Macarthur-Forrest process) report as follows:—"Your directors, in submitting to you their accounts for the year ending the 30th June last, have to regret that the results are considerably less favourable than in previous years, although this is mainly due to expenditure in connection with the litigation over our patents in the South African Republic, and on this occasion, therefore, they must forego the satisfaction of declaring a dividend. The trial of the company's patents in the South African Republic was, after many delays, brought on in February last before the Supreme Court in Pretoria. The commissions for the taking of evidence in England, the United States of America, and in Australia had sent in their evidence, and this, along with the evidence personally tendered of expert witnesses, was very fully and carefully laid before the Court, under the best legal and forensic assistance that could be employed. The trial lasted from the 13th February till early in April, when the case was closed and judgment reserved. So far the judgment has not been given, nor have we any official indication of when it may be forthcoming; but your directors are hopeful of a favourable decision. Shortly after the last annual meeting the Board deemed it advisable to issue the balance of the share capital, being 25,000 shares, and have now to report that these have since all been issued, yielding a premium of £8,8,3. 10s. In view of the gold developments in Western Australia, your Board considered it desirable in your interest to endeavour to secure good properties in that colony, at as nearly as possible bed-rock prices, and with this object engaged the services of Mr. William Griffith, an experienced *engineer, who proceeded* to West Australia in the end of last year, and *has since secured mining interests in the* Kalgoorlie field, as well as located and acquired over 400 acres near Lake Carey, on wh reports to be one of the finest reefs in Western Australia. If developments bear out the auriferous character of this property, can be no doubt that your company has secured an exceedingly va asset. In Africa, while certain interests in mining properties been abandoned, and others sold at a substantial profit, the co has acquired *inter alia* three large farms. One of these is to the of Pretoria, in a district hitherto only partially explored for min another lies to the south of the Middlevlei farm; and the third Orange Free State. These properties have all been taken in balance sheet at cost. Our share holdings have been valu or considerably under, the prices ruling at 30th June, and the gate fairly represents their value to-day. Several considerable of shares, acquired in the way of business at nominal values, for there is as yet no market, have not been taken into account. M Charles M'Culloch and Wolston Trubshawe retire from the Bo rotation, and, being eligible, offer themselves for re-election. auditors, Messrs. Thomson, Jackson, Gourlay, and Taylor, li retire, and offer themselves for re-election."

BURNTISLAND OIL COMPANY, LIMITED.

The report by the liquidator of this company has been iss the shareholders, and is as follows:—"The company w corporated on the 25th of March, 1893, under a scheme of reconstr between the older company of the same name and its creditors, was sanctioned by the court under the Joint Stock Companies Ar ment Act, 1870. The nominal capital of the company is £153 divided into 120 000 preference shares of £1 each, and 3 ordinary shares of £1. each. At the date of the liquidation, 9th 1896, 111,223 preference shares and 34,000 ordinary shares ha issued as fully paid-up to creditors and shareholders of the old co under the scheme of arrangement, and since that date the liqu has agreed to rank three creditors of the old company for 360 pref shares in all in respect of debts due by the old company, for preference shares had not already been issued. The numb preference shares issued at this date is therefore 111,583. No have been issued by the company except under the scheme of ar ment already mentioned, and there is therefore no liability attach any of them. Under the memorandum and articles of associati the company the preference shares rank before the ordinary s both as to capital and dividend. On 9th July, 1896, whe company went into liquidation, the assets of the company consis the estate of Whinnyhall, etc., in the county of Fife, with the buil and private railway thereon, and a balance of cash in bank or a amounting to £10,065. 8s. 9d. This cash consisted of the bala the proceeds of the plant, &c., at the oil works, which had gra been disposed of by private bargain by the directors during previous two years. The company's liabilities to others than the s holders had been paid off with one or two small exceptions, w are at present in course of being adjusted. Since the date of liquidation the liquidator has continued the realisation of the remai plant etc., and at the present time he has a balance on hand ava for division amongst the preference shareholders of £10,437 12 which he proposes to dispose of as follows:—In a payment of a return of capital to the preference shareholders at the rate of 1s. per share on 111,583 shares, payable on or after the 12th da October current, £10,228 8s. 10d.—retaining in hand mean £209 3s 10d. The estate of Whinnyhall, with the buildings ther and the private railway have still to be realised, and a further pay will then be made to the preference shareholders. At present difficult to estimate the value of the property. In any case, certain that the ordinary shareholders can never hope to partic in the assets of the company."

Depression of the Cheshire Salt Trade.—The Cheshire trade is in a most depressed condition. At Winsford and Moulton salt boilers are only working an average of two to three days per we and considerable distress prevails. The official returns for Septem just issued, show that the Mersey shipments were under 49,000 t which is 12,000 tons less than the corresponding period of 1 Exports have only once been lower in September for ten years.

The Disposal of Sewage Sludge and Garbage.—Mr. Wardle, of Burton-on-Trent, has submitted to the Health Commi particulars of a patent process he has invented for the disposal sewage sludge and house refuse. The principle of the process is grinding together of ashpit refuse, precipitated sewage sludge, an certain proportion of clay and coal dust, and the forming of the pul into brick-shaped blocks for the purpose of fuel. It is found that bricks are free from any offensive odour, and constitute a portable f valued at from six shillings to seven shillings per ton. It is not clai that the process can be carried on as a commercial success, but tha may be applied to getting rid of a difficulty and in reducing the exp of refuse disposal.

THE PURE BEER COMMITTEE.

PROCEEDINGS TO BE PRIVATE.

A preliminary meeting of this Committee, appointed by Treasury Minute to inquire into and report upon the questions whether legislation is required to prevent the use of deleterious substances in the manufacture of beer, and whether the materials of which beer may be composed can be defined by law without undue interference with the liberty of brewers to use any wholesome materials in brewing, has been held There was a full attendance, and the Earl of Pembroke and Montgomery occupied the chair. In the course of the discussion on procedure the point arose as to the admission of reporters of the newspapers to the sittings of the Committee. Some members strongly advocated that the evidence taken ought to be published, whilst others were opposed to the suggestion, regarding the investigation merely in the light of an inquiry to elicit information for the guidance of a great public department of the State. The speakers who adopted this view stated that their interpetration of the reference was that they should simply elicit information which should be submitted to the Chancellor of the Exchequer. In the result it was decided that reporters should not be admitted.

THE BAKU OIL INDUSTRY.

THE Report of Consul Stevens on the trade of Baku makes one envy the fortunate proprietors of oil wells in the vicinity. He says oil is still being procured in unlimited quantities, and during his stay at Baku one fountain was throwing up oil at the extraordinary rate of about 10,000 tons daily, and bringing in an income of nearly £6,000. per diem to its owner, and although it did not continue at this rate very long, nevertheless during the last two months this fountain has thrown up over 300,000 tons of naphtha, which, at the market rate that has prevailed this year, represents a sum of from £150,000. to £160,000. This oil was run into two large ponds which had been prepared for its reception, and from thence it was pumped, as fast as the capacity of the machinery would allow, direct into tank steamers lying alongside the adjoining jetties, for conveyance to Astrakhan. He adds that the produce of this well was sold at current rates as fast as it could be taken away, and it is worthy of note that the sudden addition of such a large quantity of naphtha to the already available stocks in no way affected the market value of crude oils, prices remaining firm.—*Financial News.*

GOLD IN SEA WATER.

IN this gold-seeking age the announcement that water contains a fairly uniform though small quantity of gold is sure to attract the interest of speculators. This will be so especially when thay learn that there exists in solution in sea water many millions of tons of gold. Such would appear to be the case according to Professor Liversidge, the Professor of Chemistry in Sydney University. In a very remarkable and exhaustive series of experiments which he has made there is considerable evidence in favour of gold being present in sea water off the New South Wales coast in the proportion of about half to one grain per ton, or in round numbers from 130 to 260 tons of gold per cubic mile. This, of course, means an enormous amount for the whole of the ocean, the cubic contents of which are put down approximately at 400,000,000 cubic miles, and if the gold be uniformly present at the rate of one grain per ton the total amount would be over 100,000,000,000 tons of gold. If only a loadstone for gold could be found which would attract gold and separate it from its solution, doubtless a very important stimulus would be given to the dividend-earning capacity of our ocean liners. Thus, in addition to carrying passengers and cargo, they would plough the deep to reap a rich harvest each passage by hanging a dredger, so to speak, astern, which at the end of the voyage would be relieved of its auriferous and valuable collection. We fear, however, that the precious metal will not be recovered from the sea as easily as this, considering its strong affinity for the salts of sea water. Otherwise gold would soon cease to be a rare metal, and this fact would also place bi-metallism in a very serious position. These observations are not without some bearing on medicine, since recently the value of gold salts in therapeutics has been recognised, and it cannot be doubted that the cheapening of gold would lead to their application being extended in this direction. Apart from these considerations Professor Liversidge's investigation is an important contribution to the chemistry, and probably geology, of the subject, and as a journal devoted, amongst other subjects, to chemistry we need offer no apology for expanding the possibilities opened up by his researches in these columns.—*The Lancet.*

PROGRESS AT THE KENT COAL BORINGS.

THE pit which is being sunk by the Kent Coalfields Syndicate, Limited, near Dover recently reached and exceeded a depth of 300 feet from the base of the cliff, which is itself 300 feet high at this point. Very few people are aware of the importance and extent of the works now going on to the west of Shakespeare Cliff. The pit has been christened the Brady Pit, after Mr. Francis Brady, C.E., the engineer to the South-Eastern Railway Company, under whom the experimental coal boring was conducted to a depth of 2,400 feet, disclosing six or eight seams of good bituminous coal, varying from 2 feet to 4 feet 6 inches in thickness. It is the opinion of those conducting the work that there are still thicker seams lower down. Geologically the operations will be of the most interesting description, the strata which is to be pierced being passed through for the first time. The present shaft is 17 feet finished diameter, and is being sunk and bricked with great rapidity. Continuous shifts are employed throughout the 24 hours, so that not an hour of the day is lost, the miners being chiefly experienced North of England men. The gault and lower green sand have been passed through, and in the course of the excavations sea-shells innumerable have been met with. It is a somewhat curious fact that little or no water-bearing strata has been passed through; hence the miners have had no difficulty on this account. The soil is blasted by charges of gunpowder, and as soon as a sufficient depth has been attained it is bricked in. The bricks are supplied from the Pluckley district, in Kent, and are made of a very dense clay. New and powerful machinery is being laid down, and arrangements are being made for lighting the pit by electric light. Arrangements are also being made for commencing at once a second shaft, which is to be 20 feet internal diameter, and in a position a little to the east of the present one. The depth of the first layer of coal, as revealed by the boring experiments, 1,113 feet, so that at the present rate of progress, the first coal-bearing strata should be reached by June next year. The *débris* from the pit is being used for the purpose of reclaiming the foreshore at the base of the cliffs. It is proposed to reclaim about 60 acres—which will give ample siding accommodation for the output of coal—adjacent to the South-Eastern Railway main line. The presence of firedamp is an interesting and positive evidence of the existence of the coal, and the gas still continues to come up the experimental bore-hole from the coal seams below, notwithstanding that the boring has been made two or three years. The work is being done in a very thorough way and on the latest scientific principles, with a view of large developments. The rapidity of the sinking promises to beat any previous record in pit-sinking. The managing director is Mr. G. P. Simpson, a gentleman of long practical experience in mining work of all kinds, and the consulting engineer, Mr. N. R. Griffiths, of Wrexham, is one of the most experienced mining experts of the north. The certificated manager is Mr. Alexander Reid, who resigned the management of Ffrwd Collieries, Wrexham, to go to Dover.

THE MATTHEW'S WHITE LEAD PROCESS.—The Matthew's or glycerine process for the manufacture of white lead is in active operation in a large works on the Tyne at Hebburn, the plant having been devised by and set up under the personal superintendence of Mr. Thomas K. Duggan, F.I.C., chemical engineer. The works have been in course of erection for the past six months, and have many features in them quite new to the lead trade whereby lead poisoning becomes almost impossible.

FINED FOR NOT WEARING RESPIRATORS.—Mary Ann Smith, Elizabeth Wills, Martha Langton, and Caroline Black, who are employed at the works of Messrs. Kerr and Hoegger, dyers, Newton Heath, were recently summoned before Mr. Headlam, the Manchester stipendiary magistrate, for neglecting to wear the respirators prescribed by the regulations made under the Factory Act, 1891, while engaged in "noddling" yarns dyed by yellow chromate of lead.—Mr. Rogers, inspector of factories, explained that under the Factory Act of 1891 the Secretary of State had power to schedule certain trades as dangerous, and to make regulations in connection with such trades. The regulations regarding the work in which the defendants were engaged required that the occupier of the factory should provide respirators, and that the operatives should wear them. In this case Messrs. Kerr and Hoegger had provided the necessary articles, but had great difficulty in persuading the girls to make use of them. They had cautioned them repeatedly, and had finally communicated with Mr. Rogers He visited the premises of the firm, and found the defendants working without respirators. Mr. Rogers added that the operation of "noddling" the yarns—that was, stretching the yarns after they had been dyed—was a harmful one. Seven girls working in the room had suffered serious injury to their health, and one had died. He asked that in this case the defendants might be dealt with leniently.—The defendants, who promised that in future they would wear the respirators, were severally fined 1s. and 2s. 6d. costs.

Our Book Shelf.

CATALOGUE OF CHEMICAL APPARATUS AND CHEMICALS. Birmingham: Philip Harris and Co., Ltd. 227 pp. Illustrated. Revised Edition. 1896.

In revising their catalogue of 1889, Messrs Philip Harris and Co. have added materially to the value of the publication. They have added about 1:0 pages, and changed the matter and blocks on another 50 In addition to bringing the catalogue up to date by including almost all the recent additions to chemical and chemico-physical apparatus, they have greatly increased the specialized sections, if we may so call them. In the sections devoted to providing apparatus and combinations of the same for the particular requirements of brewers, steel works, and the testing of oils and gas, many improvements are noticeable, for which alone the catalogue will repay consultation by those interested.

ESSAIS DE DESINFECTION PAR LES VAPEURS DE FORMALDEHYDE. By G. Roux and A. Trillat. 16 pp. Sceaux: Imprimerie Chartaire et Cie. 1896.

This interesting little pamphlet goes fully into a number of experiments concerning the disinfecting properties of formaldehyde. Particulars are given of the vaporising apparatus used, and special attention has been paid to the toxic effects of the vapours, with the result that the authors state that there is entire freedom from danger, while in every experiment the germicidal properties were emphatically demonstrated. The pamphlet is a reprint from the Annales de L'Institut Pasteur of May 25, 1896.

PRACTICAL METHODS OF ORGANIC CHEMISTRY. By L. Gattermann. Translated by W. B. Shober. 329 pp, with Index. 82 Illustrations. London: Macmillan and Co, Limited, 1896. 8s. 6d.

Translations of good German works are always welcome, especially when they are of an educational character. This laboratory handbook fully justifies its title. It is thoroughly practical and eminently methodical. The first or general part deals with the various physical and analytical operations that have to be employed in the subsequent preparations. These, and the special forms of apparatus for drying, crystallizing, and various ways of distilling, are dealt with in such a manner that the reader gathers a wider knowledge of their application than could be acquired from a minute description of the numerous modifications of individual operations.

In the second or special part about sixty typical reactions and preparations, covering the aliphatic, aromatic, and pyridine series are detailed. The quantities to be used are all defined with precision, and the yield that ought to be obtained, together with the boiling or melting point of the prepared product, stated at the end of each preparation. It is in this section that the true aim and virtue of the book are revealed, as each preparation is followed by practical and theoretical observations bearing upon the character and general significance of the reaction being studied. The student thus acquires a varied and helpful theoretical knowledge, which, to use a students expression, "sticks" far better than when culled from purely theoretical works or lectures. The only drawback is the style of the English, which bears a very pronounced Teutonic taint. If the English is not actually faulty the translator is guilty of a laborious and tautological style which is unfortunate in a work destined to fall into the hands of young students. The special merits of the work, however, largely condone this shortcoming, which can easily be remedied in the second edition, and the first ought to be exhausted very speedily. The illustrations throughout are very good.

VERNIS ET HUILES SICCATIVES (Varnishes and Drying Oils). By A. Livache. 316 pp. Paris: Baudry and Cie, 1896. 8s.

This is one of a series of publications issued as part of the Librairie Polytechnique. It deals fully with varnishes in the first part. For the convenience of studying these they are subdivided into varnishes prepared from a resin dissolved in a wholly volatile solvent, and those prepared from resins and a drying oil in a volatile medium. Concurrently all the properties of the necessary materials for making varnishes are considered. This portion of the book has been specially written to meet the requirements of actual manufacturers. The various methods of manufacture are also so handled as to indicate their comparative advantages or disadvantages, thus enabling manufacturers to make a better choice of methods, the applications and *minutiæ* of which they themselves are well versed in. It is certainly a book for technists.

IMPORTANT BLACK SMOKE PROSECUTION.

A CASE involving some important points under the Public Hea Act of 1875 was heard by Mr Headlam at the Manchester Pol Court on Tuesday. At the instance of the Sanitary Committee of Manchester Corporation, an order of abatement was sought against Clayton Aniline Company, Limited, Chatham-street, Clayton, were charged with creating a nuisance by allowing black smok escape from a chimney on their premises Mr. Rhodes appeared support of the application, and the defendants were represented by Pankhurst. The grounds on which the order was sought were th according to observations taken on the 23rd March, black smoke allowed to escape from the chimney for six minutes in the cours half an hour. Upon this the firm were cautioned, but in August ne ten minutes of black smoke were noticed during half an hour,- reply to questions by Dr. Pankhurst, Inspector Roe said people complained to him of the nuisance caused by the emission of bl smoke. He defined "black" smoke as smoke through which could not be seen as it escaped from the chimney.—Dr. Pankh addressed the Court at some length on behalf of the defendants said there was no evidence to show that a nuisance had been caused the emission of the black smoke, and he complained that the applica for an order of abatement was a virtual violation of a promise m when Clayton was incorporated with the City of Manchester—nam that the case of the chemical manufacturers in that district should taken into special consideration. The processes gone through chemical works, Dr. Pankhurst went on to say, necessitated in mittent firing, and the result of this was that there was black smo No smoke-consuming apparatus had been devised which could gether prevent black smoke, but the manufacturers had done al their power to reduce it.—Mr. Dreyfus, the managing director of Aniline Company, informed the Court that the Company had every known process for the prevention of smoke, and were prepar adopt any new method that could be shown to be an improvement. they were fined continually, they would be forced to remove works out of the district, or perhaps to the Continent.—Dr. Pa hurst: To the inevitable Germany?—Witness: Very likel (Laughter.) Evidence was also given with regard to the diminu in the amount of black smoke emitted that had taken place wi recent years in the district.—Mr. Headlam decided to adjourn hearing of the case for twelve weeks.—Two other applications orders of abatement against firms engaged in the manufacture chemicals in the neighbourhood were also adjourned for the s period.

MARGARINE AND ITS BYE-PRODUCTS.

AT the general meeting of the preference shareholders of Van Berg's Margarine Co., Ltd, on Wednesday, the chairman (L Ebury) made some interesting statements. Some of his opinions, howe need liberally anointing with his company's staple manufacture if t are to be swallowed whole. He said:—In Holland, in Belgium, in Germany it has been made clear that margarine is to be allowed stand on its own merits, unhampered by oppressive restrictions e on its manufacture or its sale, and in this country, though a majorit the Committee on Food Products Adulteration, which sat last sess introduced some objectionable recommendations into its report, th recommendations were not endorsed by the chairman, who represen the Government on the inquiry, and I do not think there is much of any legislation being founded on it either by the present or succeeding Government. Australian butter has been mentioned a possible rival; but the developments of intercolonial trade are be ning to restrict Australian exports, and in any case, good butter fr Australia, if forthcoming, would be contracted for here at a m higher price than is needed to make a satisfactory return to the m garine industry. It thus seems likely that margarine will hold its o as a profitable article of commerce to those who, being experts in manufacture, have also a widespread and well-established connecti In its complete form it is the backbone of this company's business I hope will long remain so; but it would be quite incorrect to supp that it is the only source of profit which your directors have at th disposal. Many of you are, no doubt, aware that in order to obtain necessary admixture of cream in the manufacture of margarine a v amount of milk is used, which, being skimmed, is sold at insignificant price to farmers for pig-feeding purposes, or, rather should say, was sold, until the happy thought was hit upon of mak it, in combination with unskimmed milk and in a condensed for available for human consumption. This condensed milk has met w an excellent reception, and seems likely rapidly to increase the cir of its admirers; but milk is not the only bye-product. I need hard perhaps, explain that in a margarine factory, where all the material severely tested, there must remain a residuum, which, though by

means unsound or unwholesome, falls short of the high standard required for edible purposes. And as it is the opinion of your directors that everything should be turned to account, it has lately been decided that soap is the form in which this hitherto neglected residuum can best administer to the comfort of the community and to the profit of the concern. (Applause.) Events are too recent to be made the subject of a prophecy, but I am assured that the samples have met with favour in the trade.

Selected Correspondence.

THE CORPORATION'S NEW SEWAGE SCHEME.

(To the Editor of the Manchester Guardian.)

SIR,—The whole and sole object of the Corporation in the culvert plan is to escape the effluent standard of the Mersey and Irwell Joint Committee. Now, Parliament has fixed no standard. Therefore, what is required is that which is reasonable in the circumstances. Sir H. Roscoe, as adviser to the Joint Committee, in the first instance said that no standard was practicable. Later, he adopts a standard which is in reality perfectly arbitrary, and not reasonable, having regard to the character of the Mersey and Irwell watershed. On this needless trouble arises. The Joint Committee has been induced to enter on a wrong path. This, I submit, is the right course: (1) Adopt the method represented by the great doctrine of Dr. Angus Smith, "the best practicable means." (2) Establish some test acceptable to the general body of chemical experts, either grains per gallon of oxidisable matter or percentages of purification, or both. (3) Then, guided by this test, make the worst cases conform to the general average. This process of the elimination of the worst in view of the general average would be a self-acting system. It would operate with great and searching force. Chemical experts could easily be named who could promptly demonstrate to the Joint Committee that by this process of the constant elimination of the worst offenders in obedience to the general average a satisfactory effluent could be got, which would gradually and certainly rise in purity in a manner simple, easy, and efficient. No interest would be unduly harassed, while all would be put on a course of constant improvement. This system will be adopted, sooner or later. Why not adopt it now?—Yours, etc.,

R. M. PANKHURST.

10, St. James's-square, Manchester, October 9th, 1896.

Trade Notes.

FIRE AT A TALLOW WORKS.—The tallow works of Messrs. Sutcliffe and Sons at Stockport were gutted by fire on Saturday morning last. The damage is estimated at £4,000.

PERSONAL.—Mr. William Whitehouse, F.C.S., has been reappointed for a period of twelve months as science master at the Wolverhampton Free Library, at a salary of £300 per annum, subject to his devoting the whole of his time to the duties of the office.

FIRE IN A CHEMICAL WORK.—About ten o'clock last Saturday night fire broke out in the works on the Eglinton Chemical Company, Firhill-road, Glasgow. Damage to building and stock was done to the extent of about £500.

ANTI-TOXIN IN AUSTRIA.—Believers in the use of anti-toxin in the treatment of diphtheria will have their faith strengthened by the recent report of the first year's experience with the remedy in Austria. It appears that out of the last 1,100 cases treated in this manner 970 recovered.

TRADE IN RUSSIA.—The Consul at Batoum states that Russia has no rival to contend with on the Khorasan market in sugar, kerosene, and candles. She also sends an imitation broadcloth which finds a great sale. It is a species of drill, with a nap, which looks very smart when new, but soon assumes a faded, greasy appearance. The dark browns and drabs are very popular. A Persian master seldom pays his servants' wages in cash, but at the New Year he must give each of them a new suit. And this imitation broadcloth serves the occasion admirably.

THE NEWCASTLE INFIRMARY.—At a public meeting recently held at Newcastle, and called in aid of the proposed new infirmary to commemorate the Queen's reign, the magnificent sum of £38,504 4s. 7d. was subscribed. Amongst the subscriptions are some £10,000. contributed by the firm and partners of Sir W. G. Armstrong and Co., Limited, and £100. by the United Alkali Company, Limited, who have extensive works in the neighbourhood. The present infirmary is near the railway, the noise from which, with the present cramped and inadequate facilities, make it absolutely necessary that a larger institution should be erected.

A CHEMICAL CARGO LOST.—During the gale that prevailed at the end of last week a schooner was lost in the estuary of the Mersey. From papers found on the body of the captain, named M. Calvin, it appears that the schooner was named the *Carmel*, and left Fleetwood on Saturday morning with a cargo of alkali for Runcorn.

MESSRS. LITTLE AND GRAHAM, LTD.—We are advised that contracts for gas-producer plant, drying machines, coal and coke conveyors and elevators, amounting in value to £38,000, were placed during the month of September, with the New Conveyor Co. and Messrs. Little and Graham, Ltd., Smethwick, Birmingham.

LEEDS AND ITS WATER SUPPLY.—The Leeds City Council, at their last meeting, decided to apply to Parliament for power to spend £650,000. upon the construction of new reservoirs in the Washburn Valley, and to purchase lands to prevent the pollution of the existing and intended reservoirs. The work is expected to be completed in about ten years.

FATAL ACCIDENT WITH ENGRAVERS' ACID.—Mr. Henry Salisbury, engraver, of New Mills, died on Tuesday from the effects of inhaling engravers' acid fumes on the previous night. Mr. Salisbury, who had just commenced business for himself, was about sixty years old. Another man, named Waterhouse, who was working with Mr. Salisbury at the time of the accident, was also injured, and is in a serious condition.

LONDON OCTOBER INDIGO SALES.—The final auction of the year opened this week with a declaration of 7,300 chests, 271 chests withdrawn, leaving 7,029 chests to be brought forward. The following alterations are to be noted, viz.:—Shipping Bengals, Consuming Bengals, and Oudes, 3d. to 4d. decline; colory Kurpah and common Kurpah, 2d. to 3d. decline; dry leaf and figs at par. 1,713 chests were withdrawn, 280 bought in, and 607 sold; 2,600 chests passed.

Obituary.—We regret to record the death of *Mr. Josiah Hardman* at his residence, Wetley Abbey, Stoke-on-Trent, Staffs. Mr. Hardman was the founder of the firm of Messrs. Hardman and Holden, Ltd., tar distillers, Miles Platting, Manchester. He was in his sixty-first year.—Last week a painful sensation was created in Stowmarket, Suffolk, by the intimation that *Mr. James Anderson*, manager of the New Explosives Company, which has extensive works in that town, had died suddenly at Sheffield whilst on his honeymoon. Mr. Anderson had broken the journey to Scotland at Sheffield to stay with his brother.—In connection with the dramatic death of the late Archbishop of Canterbury, it will be interesting to many to learn that the late Most *Reverend Edward White Benson* was the eldest son of Edward White Benson, chemical manufacturer, of Birmingham Heath, Birmingham.

GOLD OUTPUT IN THE RAND.—The output from the Rand district during the past month, as cabled by the Witwatersrand Chamber of Mines, amounts to 167,132 oz. This total, however, is exclusive of the returns of several companies which, under the title of the "Association of Mines of the South African Republic," give their joint output as 35,429 oz. The month's production is therefore, 202,561 oz., and shows a decrease of 10,857 oz. as compared with the previous total, and an increase of 7,797 oz. as compared with the corresponding month of 1895. The Glencairn Company, which produced 3,389 oz. in August, is engaged in moving its stamps, the Stanhope Mine, which yielded over 1,000 oz. in August, is flooded, and one or two others also have made no return, owing to temporary causes. The falling off of 10,857 oz. in the output as compared with the previous month is, therefore, easily accounted for.

THE POSITION OF TURPENTINE.—A good deal of interest is centred at the present moment on the position of spirits of turpentine, owing to the movement which is on foot for the curtailment of the production. This movement has been initiated by the producers and factors (the latter being the persons who provide the money in the way of advances) in the Southern States of America, whence the chief supplies of turpentine come. Some weeks ago an influential meeting was held at Savannah, at which resolutions were passed to the effect that the aggregate number of "boxes" to be cut for the ensuing year should not exceed 33⅓ per cent. of the cut of last year, and that the cutting should begin on December 15, 1896, and be entirely discontinued on February 15, 1897. This has caused the recent rise of about 1s. 3d. per cwt. in the price of turpentine from the lowest point, say 18s 3d. "spot" in London—a record price—to 19s. 6d., and also a similar advance in the price of "futures," in respect of which January-February deliveries, after being freely dealt in at 19s. 6d., are now firm at 20s. 6d. Last year's output of spirits of turpentine was about 480,000 barrels, and as the world's consumption is estimated at only 440,000 barrels, the surplus has resulted in a large accumulation of stocks in London and elsewhere, and a consequent fall in value. The price in Savannah fell to 22 cents. If the movement above referred to can be carried out, it is expected that the production will be curtailed to the extent of 100,000 barrels.

MESSRS. LYSAGHT'S REMOVAL.—Messrs. Lysaght, Limited, are considering a proposal from the Wolverhampton Town Council relative to the removal of their ironworks from the town, and their decision in the matter is daily expected with considerable interest.

QUIETUDE OF THE LANCASHIRE MINERS.—At the council meeting of the Manchester Miners' Association (which has fifteen branches and about 4,000 members) held at Walkden on Saturday last, it was announced that for the first time for over two years the Association had not a single member on the funds of the Lancashire Miners' Federation at present for strike or dispute pay. There are now very few disputes or strikes in the Lancashire and Cheshire coal trade.

PETROLEUM FATALITIES—SEVEN LIVES.—Mrs Maria Vaughan, 62 years of age, sub-postmistress at Greenfield, Holywell, has met with her death under the following circumstances:—During the past week or two she had been alone in the house, her servant sleeping out Early in the morning smoke was seen issuing from the premises, and a man named Miles, a lodger in the next house, together with Police-constable Williams, endeavoured to arouse Mrs. Vaughan They were unable to obtain any response. Miles thereupon got into the house through the kitchen window at the back On proceeding to the sitting-room he found Mrs. Vaughan in a sitting posture in a chair by the table, quite dead, she having evidently been burned to death. All her clothing had been burnt from her body, which was also terribly charred On the table were various papers, stamps, money-orders, &c, which suggested that deceased had been engaged in making up her accounts overnight. A look over the room showed that a small lamp which was hanging on the wall just above where deceased was sitting had burst, and no doubt the burning oil had fallen upon her and set her clothing alight. It is considered probable that she was asleep at the time.—A fire occurred recently on the British tramp steamer *Cyrus*, 3,368 tons, of West Hartlepool just after leaving Liverpool. While a barrel of paraffin oil was being lowered into the hold by the dock men the barrel burst, and the oil escaped and presently became ignited. The entire crew rushed to the hatchway to render assistance to the men below. The pumps were manned, and a stream of water was directed into the hold, while several tugs came to give what help they could in extinguishing the fire. Presently the flames died out, and it was then found that four of the crew had been fatally burnt. The men were carried from the hold, but died before they could be brought to the deck. While the work of removing the men was going on the flames broke out again more fiercely than ever. One sailor was left below, whom his companions were unable to rescue. The *Cyrus* meanwhile was anchored, and the fire was eventually put out. The sailor was found dead, and the body of a stowaway was discovered burnt to a cinder.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are rather quiet, even though the price has fallen, 90's now being quoted 4s 7d. for prompt; November-December, 4s. 6d.; and January-June, 6d. lower; for 50/90's, 3s 3d. is prompt value, and for above periods in forward 3s. 1½d. and 2s 11d. respectively. Carbolic acids are steady, 60% crude being a halfpenny dearer at 1s. 9½d. Crystals, 40%, are unchanged at 7½d Naphthas are firm: Crude, 1s. 3d., and solvent 1s. 6d. Anthracene is quoted 10d. for 30% A, and 8⅝d. for B Creosote is firmer at 2d. Pitch has given way again, and is now quoted 28s. 6d to 31s., f.o.b. East Coast.

Sulphate of ammonia has gone down with a rush, the Scotch market continually making records in reductions. The demand is slightly improved, and makers are offering much more freely at the lower prices. London outside makes are quoted at £7. 8s. 9d, Liverpool £7. 7s. 6d., Hull £7. 5s, and Leith £7. 2s 6d. Beckton is named at £7. 5s., but it is difficult to gauge the precise significance of the quotation.

MISCELLANEOUS CHEMICAL MARKET.

Business in the alkali trade continues tolerably brisk, but no improvement in prices can yet be recorded. Alkali, 58%, remains at £3 7s 6d, bags, f.o.r. makers' works, and with only very small demand for export at lower prices. Bleaching powder is in better request, both for home and export: £6. 10s. softwood, f.o.r, and £6. 10s. to £6 15s., hardwood, f.o.b Liverpool. Clorates continue to drop in value, and there is only a small amount of business being done: *Potash, 4d per lb; soda, 4⅞d* per lb. Caustic soda is rather easier, especially in the higher strengths; current quotations, f. Liverpool, are as follow:—77%, £9.; 74%, £8.; 70%, £7. 7s. 60%, £6 7s 6d. per ton nett, 10 ton-lots. Recovered sulphur f at £4. 12s 6d. per ton, f.o.r. Sulphate of copper continues in g request, at £16. to £16. 5d., f.o.b. Nitrate of soda steady, at 7s spot delivery. Acetates of lime, brown and grey, are rather dearer prompt delivery. Acetic acid in fair demand. Other acetates qu There is a good inquiry for potash, caustic and carbonate, and p remain steady. White powdered arsenic a little easier, at £22., f. for best brands, and stocks are small. Prussiate of potash, 5¾d 6d. per lb. Cyanide, 97/99%, 1s. per lb net. Muriate of ammo £21. per ton. Salammoniac, 39s firsts, and 35s. seconds. B advanced to 20s. per cwt. Reports of trade in general chemicals various districts do not indicate any improvement as yet.

REPORT ON MANURE MATERIAL.

The market continues to be very quiet, and the attitude of bu remains very much as reported a week ago.

The quotations for 75/80% Florida phosphate rock, 1897 ste shipment, is 6⅛d. per unit, c.f and i, to good U.K. ports, but s U.K. buyers do not respond. On the Continent, however, la seem more disposed to entertain business, the quotations being 6 per unit for North Sea ports, and 6⅜d. per unit Baltic ports. Algerian phosphate, 58 63%, the quotation is 5¼d. per unit, an 63/70% 5½d. per unit. South Carolina River rock offers at 5¼d. unit, and 5½d. is now asked for Peace River rock.

There would probably now be buyers of River Plate bone £3. 12s 6d. £3. 16s. 3d. now asked for Bombay and Kurra bone meal, also for crushed Kurrachee bones, for shipment; and definite order £3. 15s. per ton would be business.

Nitrate of soda remains quiet at 7s. 10½. per cwt. for fine qu on spot. Due cargoes are worth about 7s 10½d. per cwt.

In miscellaneous nitrogenous material, there is rather more d low prices being the attraction Fish guano, high test, offers, in h cargoes, at 6s 3d. per unit ammonia, and 6d. per unit phospha lime, net cash, in bags, gross weights, c.i.f. U.K.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants close 47s. 1½d.: Middlesbrough 39s. cash, and hematite 48s. Copper quiet: Chili bars, G.O.B.'s and G.M.B's., closed £46. 16s. 3d. to £47. 1s. 3d. cash, and £47. 5s. to £47. three months Tin steady: Straits closed at £56. 12s. 6d £57. 2s. 6d. cash, and £57. 5s. to £57. 15s. three months; Austra £57. 17s. 6d. English ingots, £60. 15s to £61. Lead: I Spanish, £11 5s; English, £11. 7s. 6d. to £11. 10s. Sil spelter, ordinary, £16. 7s. 6d. Nickel, 1s 2½d. Antimony, £2 Quicksilver: First hands, £6. 12s. 6d.; second hands, £6. *Copper shares* dull: Cape, 2⅜ to 2½; Copiapo, 2¾ to Libiola, 2¼ to 2⅜; Mason and Barry, 2⅜ to 3⅛; Rio Tinto to 24½; Tharsis, 5⅛ to 5¾.

GLASGOW, WEDNESDAY.—Market again strong, with l business. Scotch done at 46s. 11½d., 47s. 2½d., and 47s. cash, also at 47s 1½d and 47s. 4½d. one month; closing buyers at 47s 1½d. cash, sellers ask 47s. 2d. Cleveland don 38s. 11½d., 39s. 1d., 39s, and 39s. 1d. cash; closing with bu at 39s. cash, sellers ask 39s. 1d. Cumberland hematite don 48s. 4½d., 48s. 5d., and 48s. 4d. cash, also at 48s 6d., and 48s one month; closing with buyers at 48s. 4½d. cash, sellers 48s 5d. Middlesbrough hematite done at 46s. 6d one month, clo with buyers at 46s. 3½d. cash.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDA

OILS.—Palm oil is steady and active, there having been m better sales (over 500 tons) of Lagos at £23 10s., spot; Octo £23. 15s. Soft oils, £21. 12s 6d. to £21. 15s., ex quay and tra Hard oils, for October-November, have been done at £9 17s. transit. Olive is strong and the demand steady at fair prices. Lin has been fairly active, but closes quieter at 17s. 9d. to 18s. 6d. cwt., according to quality, for Liverpool makes, in export ca Cottonseed oil is firmer, and prices are higher. Liverpool refined stands steady at 17s to 17s. 6d., and American 17s. 6d. to 18s., acc ing to quality and quantity. Castor oil maintains its firm position, business has been checked somewhat, the demand for both g seconds Calcutta and first pressure French, at 3d. per lb., being ra quiet. Tallow is firm, with a moderate business doing at full m Resin is generally in good demand, and prices are steady. Cons

edium grades are scarce and very firm. Spirits of turpentine, as be expected from the aspect of the forward market, are firm at er cwt Petroleum steady, at 6⅜d. to 7¼d. for American, and n refined 5¾d to 5⅞d. per gallon.

LOURS. Prices are steady, and practically without change, : Oxfordshire, common, £10., medium, £12., best, £15. shire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, f.C., 65s. Umber 40s. to 45s. White lead, £16. ead unchanged. Venetian red, £6. to £10. Cobalt: Pre- oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, nedium, £10.: finest, £20 Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

fall in sulphate of ammonia holds on its regretted course y, and to-day the highest procurable for spot Leith is £7. 6s. 3d. is nothing on the move for postponed delivery General chemi- ive not improved, and the tendency is still, if anything, down- The promise, also, of the closing of the Baltic outlet earlier sual this year does not tend to improve the prospect. Sulphate per is easier by about 5s., and saltcake is cheaper again. In the of mineral oils and solid paraffins there is a change which es in the favour of the makers. They have been able to put up tting oils about 5s. per ton all over, the cause of this being the prices now demanded for the American makes of these lubri- Lubricating oil is now the healthiest product of the mineral oil araffin manufacture. Burning oil moves away at undernoted stimulated by good discounts, but the strength of the move- s not up to makers' desires entirely. Solid paraffins in moderate it, at prices rather unsatisfactory for the sellers.

ef prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, , £4. 12s. 6d. to £5. 2s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. Glasgow; caustic soda, white, 74° £8. 5s., 70/72° £7. 5s, 60/62° 5s., and cream 60/62° £6., all nett, Liverpool; bleaching r, £6. 12s. 6d. nett, Tyne; saltcake, 19s.; borax, English, , £18., and boracic acid, £28. nett, Glasgow; bicarbonate of 5-cwt. casks, £6. 7s. 6d, and 1-cwt. casks £6. 15s. nett, Liverpool; mate of potash, 4½d. nett, for Scotch and English deliveries (for , 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); te of potash, 4¼d. less 5%, any port; nitrate of soda, 7s. 10 d. s.; sulphate of ammonia, £7. 6s. 3d. prompt, f.o.b., ; salammoniac, first and second white, £37. and £35. nett, ort; sulphate of copper, £16. to £16. 5s. less 5%, Liverpool; n scale, hard, 1$\frac{7}{16}$d. to 1¾d., and soft, 1½d. to 1⅞d. per lb.; n wax, 120° semi-refined, 1$\frac{15}{16}$d. to 2⅛d. per lb.; paraffin spirit tha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and l, 6½d., at Glasgow and other big centres, for Scotch buyers ish sales ½d. to ¾d. lower); ditto (lubricating) 865° £4. 15s. to 885° £5. 15s. to £6. 5s., and 890/895° £6. to £6. 15s. Week's ts of sugar at Greenock were nil. The Glebe Sugar Refinery close last Saturday for want of the raw material.

TYNE CHEMICAL REPORT.

TUESDAY.

re is no change to report in the chemical markets. Sulphur con- scarce at £4. 15s. per ton. Soda crystals, £2. 2s 6 l. per ton, weight locally. Caustic 76/77% £9. to £9 5s. per ton.; £7. to £7. 15s. for 70%.

aching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. n, nett: recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; ish, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s. 6d. per ett; white alkali, 48%, £4. 12s. 6d. per ton, nett; do., 50%, £4. d. per ton, nett; do., 52%, £5. 2s. 6d. per ton, nett; hyposulphite a, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. n, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; 100° Tw., £3. per ton, nett; do., 140° Tw. £3. 7s. 6d. on, nett; soda crystals, casks, £2. 2s. 6d. per ton, weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; te of potash, 5d. per lb., less 6%; pearl hardening, per ton, nett; pure white sulphate of alumina, £3 17s. 6d. n, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, l crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. n nett; sulphide of barium, crystals, £4. 15s. per ton, nett; nate of alumina, £30. per ton, nett; aluminate of soda, £30. n, nett.

SALT.—South Durham Salt is steady at 9s. per ton, f.o.b Tees.

COALS.—The market is rather quieter as regards export business, and prices somewhat weaker. Gas and household coals are increasing in consumption and in better demand. Prices to-day:—Northumbrian steam, 8s. to 8s. 3d. per ton; second qualities, 7s. to 7s. 3d. per ton. Small steam, 3s. 3d. to 3s. 6d per ton. Gas coals, 6s. 6d. to 6s. 9d. per ton Household coals, 10s. to 11s. per ton. Coke steady, 14s. 6d. to 15s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—All oils show a steady advance in rates, which may be expected considering the very low values lately current in conjunction with a better demand, and consequently dearer money. Still, under any circumstances, may always be expected the usual demand for soap-making oils and fats towards the latter part of the year. The import of linseed for the week has been 33,375 quarters - from St. Petersburg 16,320 quarters; from New York 15,482 quarters; from Riga 1,250 quarters; and from Harlingen 323 quarters. Linseed oil, after advancing about 15s. per ton on the spot, closes quieter with sellers at 16s., naked; November-December offer at 16s. 3d.; and January-April 16s. 7½d.: May-August quoted 17s; boiled and refined £1. to £2. per ton extra. Export for week has been 1,760 cwts. Of cottonseed there have been no imports for the week. Refined cotton oil is quoted 5s. to 10s. per ton dearer, closing steady at 15s, naked spot; November-April, 15s. 4½d; casks, £1., and ordinary barrels 30s. per ton extra. Export of refined during the week has been 4,060 cwts Rape oil continues very firm and scarce. Castor oil from 3⅞d. per lb. first pressure. Turpentine, 21s. 6d.; olive oil unchanged; Belgian oleines firmer in sympathy with fats; pale, £18. 15s.; saponified, £18. 15s per ton c.i.f. Hull. Green olive soaps, 60%, £16. per ton c.i.f. Hull. Cod oils, £16. to £18. per ton. Yorkshire grease, £8. per ton.

CAKES.—Linseed cakes, firmer; 95% pure, £5. 17s 6d.; oil-cakes, £4. 17s. 6d. Cotton cakes in small demand for spot, and prices incline rather lower; best makes, spot, £3. 17s. 6d.; November, £3. 12s. 6d.; November-April, £3. 10s. sellers; £3 7s. 6d. buyers. Rape cakes unaltered.

PAINTS.—The demand shows some falling off which may be expected unless a demand for export sets in. Prices are unchanged. White lead and red lead, also oxide of zinc unaltered. Ready-mixed paints, in tins, £24 per ton. Black, blue, green, Venetian, and oxide of iron reds, ground in oil, from £11. Paint remover, 25s. to 30s per cwt. Imperial black varnish, £5. 5s. per ton in barrels, f.o.b. Hull.

New Companies.

Bear Creek Petroleum Co., Ltd.—CAPITAL, £5,000., in shares of £1. each. This company has been formed to acquire the business now carried on by the Goole Ropery and Ship Chandler Co., Ltd., to trade as oil merchants, etc.

R. Walton and Co., Ltd.—CAPITAL, £2,000., in £1. shares. This company has been formed to manufacture and deal in paints, oils, varnishes, and drysalteries.

Vacuum Grain Drying Co., Ltd.—CAPITAL, £1,000., in £1. shares. This company has been formed to acquire and develop a certain patent (18,666 of 1895) for drying grains, seeds, etc, in vacuum chambers.

Glasgow Coal and Fire Clay Co., Ltd.—CAPITAL, £20,000., in £1. shares. This company has been formed to trade as coal masters, coke and gas manufacturers, tar distillers, etc. The subscribers to the memorandum of association are:—J. Allan, Bertrohill, Shettleston, Lanarkshire, coalmaster; R. M. Stoddard, 37, Montrose-street, Glasgow, produce broker; J. Allen, Jun., Bertrohill, Shettleston, Lanarkshire, brick salesman; J. Selkirk, 64, W. Regent-street, Glasgow, C.A.; G. Watson, 70, Wellington-street, Glasgow, West India merchant; H. S. Carmichael, 67, St. Vincent-street, Glasgow, shipping agent; J. Ferguson, 24, Regent Moray-street, Glasgow, builder.

Gazette Notices.

PARTNERSHIP DISSOLVED.

F. H. WAITE and G. J. WIDGERY, under the style of the Bristol Dry Soap Co Bristol

BANKRUPTCY ACTS, 1883 and 1890.
Adjudication.

SMITH, SAMPSON, Bradford, soap boiler.

IMPORTS OF CHEMICAL PRODUCTS

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 3rd.

Acetate of Lime—
U. States, 780 bgs. Johnson & Hooper

Acetic Acid—
Holland, 50 pkgs. R. W Greeff & Co.
" 90 A. & M. Zimmermann
" 71 Little & Johnston
" 70 Phillipps & Graves

Acetone—
Austria, 15 cks. Thames S. T. & L. Co.

Alkali—
France, 40 c. J. Barber & Co.

Alum—
Holland, 30 cks. R. W. Greeff & Co.
" 243 pks. Ohlenschlager Brs.

Antimony Ore—
Japan, 25 t. J. Swire & Sons
France, 1 H. Johnson & Sons
Spain, 20 H. Grey, jun.
N. Zealand, 2 Pitt & Scott

Asbestos—
U. States, £35 W. Byford
Italy, 55 Bender & Co.
" 209 Imperial Asbestos Co.
" 42 Pickford & Co.
" 170 London Asbestos Co.
" 380 Brit. Asbestos Co.

Barium Chloride—
Holland, 23 cks. Petri Brs.

Barytes—
Belgium, 46 brls. J. L. Lyon & Co.
Holland, 23 cks. O'Hara & Hoar
" 57 J. L. Lyon & Co.
" 57 D. Storer & Sons
Belgium, 100 bgs. W. Harrison & Co.
Holland, 40 Robertson, Seeley & Co.
Belgium, 47 Perkins & Homer
Holland, 55 W. Harrison & Co.

Bleaching Powder—
Germany, 12 cks. R. W. Greeff & Co.

Boracic Acid—
Italy, 12 pks. Union L. Co.

Camphor—
Germany, 205 cs. City Coml. Wf. Co.
" 35 R. Warner & Co.
France, 100 S. Figgis & Co.

Caoutchouc—
M'dagasc'r, 114 c. Procter Brs.
France, 14 H. Johnson & Sons
Natal, 104 Anderson, Weber & Co.
Cape, 80 Hammond & Co.
E. Indies, 5 Henderson Brs.
Ceylon, 6 Major & Field
Rangoon, 6 Prop. Hay's Wf.

Castor Oil—
France, 25 brls. Lucas & Spencer's Wf., Ld.
E. Indies, 200 cs. Dundee, Perth & London Co.
Italy, 30 Hodgkinsons, Treacher & Co.
" 10 Major & Field
" 4 Beresford & Co.
E. Indies, 64 cks. J. Owen
Italy, 5 Potter & Clarke
" 10 J. Knill & Co.
Italy, 10 A Laming & Co.
E. Indies, 30 T. T. Creed
Italy, 25 Barron, Harveys & Co
Belgium, 28 brls. R G. Hall & Co.
" 36 W. T. Mills

Caustic Potash—
France, 20 drs. Petri Brs.
Canada, 10 brls. Charles & Fox
France, 65 W. E. Cole
" 4 J. A Reid
" 46 Phillipps & Graves

Chemicals *(otherwise unstated.)*—
Germany, £15 L. & I. D. Jt. Co.
Holland, 178 T. H. Lee
" 32 Petri Brs.
Belgium, 58 T. H. Lee
Germany, 101 T. L. Lee
" 102 Phillipps & Graves
" 1,045 A. & M. Zimmermann
U. States, 38 A. E. Piggott
Holland, 30 H. Lorenz
France, 37 Flageollet & Co
Sweden, 21 Hughes, Chemery & Co.
Belgium, 43 O. Scholzig
Germany, 90 Fuerst Brs.
" 40 T. Palmer
" 36 Charles & Fox
Holland, 70 J. Barber & Co
" 19 H. Johnson & Sons
Belgium, 53 Société John Cockerill
France, 30 J. Harrison
Holland, 150 B. & F. Wf. Co.
Germany, 10 Standard Ammonia Co.

Citrate of Lime—
Italy, 24 cks. Fellows, Morton & Co.

Cobalt Ore—
France, 152 t. R. Waters

Cream of Tartar—
Spain, 15 cks. W. C. Bacon & Co.
France, 5 M. Ashby, Ld.
" 30 kgs. Finlay & Co.
Holland, 18 Kirkpatrick & Co
Italy, 12 Thames S. T. & L. Co.
France, 2 B. & F. Wf. Co

Cresoline—
U. States, 53 cs. Lunham Moore

Dextrine—
Germany, 200 bgs. J. Barber & Co.
" 31 pks. Pronk, Davis & Co.

Dyestuffs—
Anthracene
Holland, 44 cks. Burt, Boulton & Co.
Argols
Italy, 376 bgs. B. Jacob & Sons
" 520 Thames S. Tug & L. Co., Ld.
Cochineal
Canaries, 5 bgs. Knowles & Foster
" 4 Kuhner, Henderson & Co.
" 7 G. S. Bruce
" 15 W. M. Bruce & Sons
" 9 W. M. Smith & Sons
Cutch
Ceylon, 100 bxs. Ross & Deering
Rangoon, 500 A. Howden & Co.
Ceylon 179 cs Cayzer, Irvine & Co.
Rangoon, 500 Leach & Co.
E. Indies, 550 Wrighton & Son
Extracts
U. States, 50 bxs. W. Burton & Sons
France, 200 T. H. Lee
" 205 pks. Bennett S. S. Co.
Valentia, 100 brls. H. Grey, jun.
Austria, 100 A. J. Humphery
Gambier
E. Indies, 264 bls Prop. Hay's Wf.
Singapore, 3,279 Adamson, Gilfillan & Co
Indigo
E. Indies, 44 chts. Parry & Co.
Germany, 21 R. von Glehn & Sons
E. Indies, 6 P. Macfadyen & Co
" 10 Eales, Prince & Co.
" 7 Parsons & Keith
" 9 J. Hatton Hall & Co.
" 4 Loughland, Mackay & Co.
Madder
Holland, 1 ck. J van der Laan
Myrabolams
E Indies, 2,049 bgs. W. Shelcott
" 2,732 J. P. Alps & Co.
Orchella
Portugal, 60 bls. Prop Bull Wf.
Saffron
Spain, 3 cs. Richardson, Spence & Co.
Shumac
Italy, 500 bgs J. Kitchin, Ld.
Tanners' Bark
Adelaide, 140 t. Baxter & Hoare

Farina—
Germany, 50 bgs. M. D. Co.
Holland, 100 G. Hornzee
France, 1 cs. Hernu, Peron & Co.
Germany, 50 G. R. Haller

French Chalk—
Italy, £240 Harrison & Co.
Austria, 75 Taylor Brs.

Gamboge—
China, 36 c. S. Figgis & Co.

Glucose—
U. States, 2,500 pks. 2,500 c. Pearce, Pelly & Co.
" 250 250 c. Bennett S. S. Co.
" 50 280 Williams, Torrey & Co.
" 50 285 W. H. Sampson
" 750 750 Bellamy & Co.
" 750 750 L. & I. D. Jt. Co.
" 1,472 1,472 Fellows, Morton & Co.
" 1,500 1,500 Boake, Roberts & Co.
" 750 750 Robinson Son & Co.
Germany, 8 63 J. Knill & Co.
France, 100 100 Vokins & Co.
Germany, 15 105 M. D. Co
U. States, 1,994 2,117 R. G. Hall & Co.

Glue—
Holland, £60 G. Rahn & Co
France, 15 Staveley & Co.
" 100 E. Fischel & Co.
" 13 J. Harrison
Germany, 25 Craven & Co.
Belgium, 200 J. Barber & Co.
Italy, 125 Hunt & Kerr
Germany, 12 Phillipps & Graves
" 220 Haeffner, Hilpert & Co.
Belgium, 90 Taylor Brs.
Holland, 18 H. Johnson & Sons
Austria, 200 Steinhoff, Sons & Co.
U. States, 90 C. Ward
Belgium, 7 Société John Cockerill
Austria, 25 Soundy & Sons
France, 259 Burnett Brs. & Sons
U States, 156 Anglo-Am. Oil Co.
Holland, 35 Phillipps & Graves
France, 10 Bennett S. S Co.

Gypsum—
France, 170 t. Lawes Chemica Manure Co

Iron Oxide—
Austria 30 cks. O'Hara & Hoar

Litharge—
Holland, 43 cks. Spies Brs. & Co.
Germany, 10 D. Storer & Sons
" 4 H. Lambert

Manganese—
Germany, 2 t. H. Honychurch & Co.

Manure—
E. Indies, 25 t. Fox, Roy, & Co.
Germany, 5 F. Allen & Sons
Belgium, 5 Chemical Works, Ltd.
Germany, 17 A. J. Luke & Co.
Belgium, 20 Leach & Co.
" 20 Lawes Chemi. M. Co
Holland, 2 Anderson, Webber, & Smith
Algeria 480 Odams Chemical M. Co.

Metallic Oxide—
Germany, 2 cks. Brit. Anti-Fouling Compo Co.

Methyl Alcohol—
Belgium, 19 dms Lister & Biggs
Germany, 10 Stein Brs
U. States, 40 brls. "

Mica—
Ceylon, £160 E. Davis & Co.
E. Indies, 390 L. & I. D. Jt. Co.
Canada, 140 H & G. Duffield
E. Indies, 325 W. M. Smith & Sons

Mineral White—
Austria, 100 bgt. Stobbe

Minium—
Holland, 10 cks. J. Barb

Molasses—
Egypt, — cks 40,643 c. Franc
U. States, 50 623
" 25 138 R.
" 500 2,725 F.

Ochre—
Holland, 12 cks. Phillipps
France, 845 W. Harris
" 20 L. & I. D
Germany, 1 Brit. Anti Co

Phosphate Rock—
E. Indies, 12 t. L. & I D
Algeria, 1,250 Lawes Max

Pitch—
Germany, 33 brls. W. F.

Plumbago—
Ceylon, 64 cks. Ross &
" 72 Eeverdo
Germany, 57 B. C
Ceylon, 17 Hender
" 651 J. Threlkler, So
" 52 Williams, Torrey

Potassium Bicarbonate—
Holland, 9 cks. A. & M.

Potassium Carbonate—
France, 178 c. P
" 50 J.

Potassium Cyanide—
Germany, 59 cks. [illegible]
" 50 L. & I. D.
Holland, 62 P. Hey

Potassium Chloride—
Holland, 17 cks. H. Johnson

Potassium Sulphate—
Belgium, 50 bgs. Charles

Pyrites—
Spain, 1,463 t. Anderson, An

Quicksilver—
Italy, 100 flsks. H. Bath

Rosin—
U. States, 907 brls. Fairclough
" 2,100 F. & S. Ch
" 2,000 Prod. Broke
France, 30 J. Watt

Rosin Oil—
Germany, 20 brls C. B. La
France, 100 A. Brown

Saltpetre—
E. Indies, 236 bgs. L. & I. D.
Germany, 38 sks. P. Hecker

Soda—
Holland, 2,000 c. R. W

Sodium Acetate—
France, 35 cks. H. L

Sodium Prussiate—
Belgium, 20 brls. D. C. Tho

Starch—
Holland, 50 cs. E. & T.
Belgium, 20 Taylo
" 30 Leach &
France, 530 E. & T.
Holland, 132 T. H.
" 60 Phillipps & G
Germany, 88
Belgium 439 F. Claydon &
Holland, 160 G. Rahn &

Stearine—
France, 80 sks. H. Wallis
Belgium 13 cks. H. Hill &
" 43 pkgs. Schenker &
France, 250 bgs. G. Bure &

ır—
150 t. Union L. Co.

e, £25 E. Wundschuegl & Co.
40 Blackwell, Sons, & Co.
35 Brasch & Rothenstein

narine—
nd, 20 cks. Hernu, Peron, & Co.
3 G. Rahn & Co.
4 Phillipps & Graves
1 W. Harrison & Co.

Lead—
any, 20 cks. M. Ashby, Ltd.
23 H. B. Alder & Co.
50 Taylor Brs.
23 D. Storer & Sons
ım, 21 Perkins & Homer
any, 22 H. Lambert
20 Steinhoff, Sons, & Co.
41 F. G. Clifford
nd, 57 T. & W. Farmiloe
20 W. A. Rose & Co.
20 E. J. Diggins
16 Phillipps & Graves
um, 67 Leach & Co.

Pulp—
any, 101 bls. G. S. N. Co.
200 Beadle Brs.
163 O. Herrlich
en, 300 W. G. Taylor & Co.
67 pks. W. D. Cork
any, 200 Christophersen, Andrews, & Co.
ates, 160 Henderson, Craig, & Co.
170 L. & I. D. Jt. Co.

Oxide—
ıany, 9 cks. R. W. Greeff & Co.
ium, 30 Ross & Deering
tates, 100 M. Ashby, Ltd.
and, 50 J. Matton
, 50 Burrell & Co.
, 75 M. Ashby, Ltd.
, 500 Soundy & Sons
ıany, 50 D. Storer & Sons

Sulphate—
ıany, 6 cks. Stobbs, Wilson, & Co.

White—
and, 80 cks. Spier Brs. & Co.

IVERPOOL.

Week ending October 1st.

men—
ıburg, 2 cs.

Cake—
lerdam, 82 cks.

nony Oxide—
seilles, 5 brls.

nic—
ıburg 10 cks.

tes—
terdam, 20 cks.
werp, 14 184 bgs.

cic Acid—
horn, 110 cks.

phor—
candria, 1 cs. F. Albrecht & Co.

ıtchouc—
rre, 27 cks.

or Oil—
rseilles, 50 cs. 531 brls. Henderson Brs.
horn, 20

c Acid—
ssina, 46 cks.

urs—
rseilles, 16 cs. Henderson Brs.
tterdam, 2 cks.
twerp, 1
ris, 2 Seine & Mersey S. S. Co., Ld.

onseed Oil—
w York, 10 brls.

am of Tartar—
orto, 4 cks. Baird Brs.

stuffs—
Fustic
mpico, 3,505 ps. W. H. Thompson & Co.
Gambier
gapore, 1,526 bgs 4,190 bls.
Indigo
ston, 8 kgs.
Logwood
rcelona, 1,100 ps. Larrinaga & Co.

Shumac
Palermo, 50 bgs. H. Rooke, Son & Co.
,, 2,115 40 bls.
Valonia
Smyrna, 25 t. G. Essayan & Co.

Glucose—
New York, 200 brls. T. M. Duche & Sons
,, 325

Glue—
Marseilles, 5 cs.
Rotterdam, 1 ble. 220 bgs.
New York, 10 brls. Anglo-Am Oil Co., Ld.
Rouen, 27 cks. Co.-op. W'sale Society, Ld.

Manganese—
Constantinople, 1 bx.
Coquimbo, 1,800 t.

Manganese Ore—
Stratoni, 2,921 t.

Mineral White—
Gothenburg, 1 cs.

Molasses—
Alexandria 1,300 brls.

Ochre—
Marseilles, 75 brls. Henderson Brs.
,, 121 50 cs. 25 cks.

Paint—
New York 1 cs. W. J. Rodatz & Co
Boston, 1 bx.

Paraffin Scale—
New York, 891 brls. Thompson & Bedford
Philadelphia, 137

Pitch—
Dunkirk, 62 cks.

Potash—
Hamburg, 10 cks.
Dunkirk, 9 64 dms.
Antwerp, 16

Pumice Stone—
Messina, 70 bgs.

Pyrites—
Huelva, 1,647 t. Matheson & Co.

Rosin—
Boston, 201 brls.

Saltpetre—
Hamburg, 7 brls. 180 kgs.

Soap—
Smyrna, 16 cs. H Varbetian & Co.
,, 100 bxs.
Marseilles, 92 96
Boston, 5
Constantinople, 4 T. Hazzopulo & Co.

Soapstone—
Bordeaux, 200 bgs. G. G. Blackwell, Sons & Co.

Starch—
Hamburg, 156 cs.
Paris, 100 Seine & Mersey S. S. Co., Ld.
Rotterdam, 60

Sulphur—
Catania, 67 cks 100 bgs.

Talc—
Marseilles, 100 bgs. Henderson Brs

Tallow—
Boston, 506 brls. 154 tcs.
New York, 1 pk. W. Wardens & Son
B. Ayres, 552 hds.
Montreal, 150
New York, 20 cks. 115 brls. Colby & Co.

Tartar—
Bordeaux, 49 cks

Tartaric Acid—
Marseilles, 5 cks.

Turpentine—
Tampico, 19 brls. Janffried & Gariel

Varnish—
New York, 9 brls. W. A. Warren

White Lead—
Amsterdam, 8 cks.
Rotterdam, 74
,, 14 John Mathews & Co.

Wood Naphtha—
Antwerp, 2 dms.

Wood Pulp—
Gefle, 1,035 bls.
Oporto, 1,000 Caima Wood Pulp Co.
Gothenburg, 150 G. F. Green & Co.

Zinc White—
Rotterdam 100 cks.

MANCHESTER.

Week ending October 3rd.

Acetate of Lime—
New York 1,830 sks.

Alumina Sulphate—
Rotterdam 64 cks.

Aluminous Cake—
Rotterdam, 122 cks.

Ammonium Chloride—
Antwerp, 8 brls.

Ammonium Phosphate—
Rotterdam, 12 cks

Antimony Oxalate—
Rotterdam. 4 cks.

Antimony Salts—
Rotterdam, 10 cks.

Barytes—
Antwerp, 50 bgs.

Calcium Carbide—
Treport, 5 dms.

Caustic Potash—
Treport, 61 cks. 39 dms

Coal Products *(otherwise undes.)*—
Antwerp, 2 cks. J T. Fletcher & Co.

Colours—
Paris, 10 cks. 1 cs.
Boulogne, 13
Rotterdam, 13 21 27 bxs.
124 brls. 2 pks.
Hamburg, 14
Antwerp, 31

Cottonseed Oil—
Rotterdam, 100 brls.

Dyestuffs—
Alizarine
Rotterdam, 49 cks. 1 cs.
Shumac
Palermo, 500 bls. 50 bgs.

Farina—
Stettin, 594 bgs.
Hamburg, 185

Glucose—
New York, 100 brls. T. M. Duche & Sons
,, 150
Stettin, 1,174 bgs.

Glue—
Rotterdam, 40 bgs. 20 cs.
Fiume, 8 cks.
Treport, 4 2 bls.

Lead Chloride—
Hamburg, 1 ck.

Limestone—
Antwerp, 7 cs. J. T. Fletcher & Co
,, 3 crts.

Litharge—
Rotterdam, 6 cks.

Mineral White—
Fiume, 450 bgs.

Oxalic Acid—
Rotterdam, 30 cks.

Paraffin Scale—
New York, 900 brls. Anglo-American Oil Co., Ld

Pitch—
Hamburg, 226 cks.

Potash—
Treport, 2 cks.

Potassium Chlorate—
Gothenburg, 40 kgs.

Potassium Chloride—
Hamburg, 30 cks. 2 dms.

Pumice Stone—
Rotterdam, 6 cs

Saltpetre—
Hamburg, 1 ck.

Soap—
Palermo, 100 bxs.

Sodium Nitrate—
Rotterdam, 4 cks.

Starch—
New York, 400 bgs.
Rotterdam, 22 cs.
Hamburg, 20 cks. 160
Antwerp, 379
Fiume, 100 bgs.

Stearine—
New York, 50 hds. Co-op. W'sale Society

Sulphuric Acid—
Rotterdam, 10 dms.

Tartaric Acid—
Rotterdam, 4 cks.

Tin Perchloride—
Hamburg, 10 cs.

Ultramarine—
Rotterdam, 5 cs.

Waste Salt—
Hamburg, 304 bgs. and a qty

Wood Pulp—
Gothenburg, 68 bls.
Copenhagen, 480
Fiume, 102 pks.
Christiania, 688 W. H. Ingram
Drammen, 1,025 ,,
Porsgrund, 2,800
Christiania, 168
Holmstrand, 2,000
Helsingfors, 201
Arendal, 2,400
Skien, 1,649

Zinc Oxide—
New York, 100 brls.
Rotterdam, 75
Hamburg, 2 cks.

HULL.

Week ending October 3rd.

Acids—
Boston, 20 brls Wilson, Sons, & Co., Ld
Rotterdam, 9 blns. W. & C. L. Ringrose
Antwerp, 5 cks.

Antimony—
Dunkirk, 2 cks Wilson, Sons, & Co., Ld.

Barytes—
Rotterdam, 91 cks. Hutchinson & Son
Antwerp, 31 Bailey & Leetham
Amsterdam, 24 Hutchinson & Son
Bremen, 18 G. Holmes & Co.

Chemicals *(otherwise undescribed)*
Bremen, 4 cs. 3 cks. Veltmann & Co.
Dunkirk, 52 pks. Wilson,
40 dms. Sons, & Co., Ld.
Antwerp, 10 brls. ,,
New York, 5 cks.
Hamburg, 10 brls. ,,

Cod Oil—
Trieste, 5 cs. Wilson, Sons, & Co., Ld.

Colours—
Antwerp, 14 pks. Wilson, Sons, & Co., Ld.
Danzig, 20 cks.
Hamburg, 15 ,,
Riga, 25 ,,
Rotterdam, 37 4 W. & C. L.
11 brls. 1 cs. 6 bxs Ringrose
,, 8 cks. Hutchinson & Son

Cryolite—
Copenhagen, 3 cks. Wilson, Sons, & Co., Ld.

Dyestuffs—
Alizarine
Rotterdam, 17 brls.
,, 51 pks. W. & C. L. Ringrose
Shumac
Trieste, 105 bgs Wilson, Sons, & Co., Ld.
Palermo, 1,185 ,,
,, 1,250
Valonia
Trieste, 528 bgs Wilson, Sons, & Co., Ld.

Dyestuffs *(otherwise undescribed)*
Rotterdam, 67 b ls. 13 cs.

Farina—
Ghent, 40 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 550 bls. Hutchinson & Son

Glucose—
New York, 500 brls.

Glue—
Antwerp, 2 cks. Bailey & Leetham
Hamburg, 80 pks.
Bremen, 10 bgs. Veltmann & Co.
" 40
Rouen, 36 cks. Rawson & Robinson
20 cs.

Kaolin—
Amsterdam, 20 cks. Reckitt & Sons

Lime—
Rotterdam, 25 cks. W. & C. L. Ringrose

Manganese—
Rotterdam, 8 cks. Hutchinson & Son
Antwerp, 10 brls. Wilson, Sons, & Co., Ld.

Naphtha Oil—
St. Petersburg, 42 cks.
Riga, 55 Helmsing & Son

Ochre—
Rouen, 6 cks. Rawson & Robinson

Paint—
Christiania, 4 cs. Wilson, Sons, & Co., Ld.

Paraffin Wax—
New York, 10 bgs. Wilson, Sons, & Co , Ld.

Phosphate—
Ghent, 80 t. Wilson Sons, & Co., Ld.

Phosphorus—
New York, 20 cs. Wilson, Sons, & Co., Ld.

Pitch—
Amsterdam, 25 cks. W. & C. L. Ringrose

Plumbago—
Hamburg, 38 cks. Wilson, Sons, & Co., Ld.

Pumice Stone—
Rotterdam, 5 cs. Hutchinson & Son
Messina, 151 pks. Wilson, Sons & Co , Ld.

Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.

Soap—
Bari, 2 bx. Wilson, Sons, & Co., Ld.

Starch—
Amsterdam, 10 cs. W. & C. L. Ringrose
Ghent, 291 Wilson, Sons, & Co., Ld.
Hamburg, 10 kgs. "
Bremen, 1,726 5 brls. Veltmann & Co.

Stearine—
Antwerp, 78 pks. Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 561 pks. Wilson, Sons, & Co., Ld.
" 400 bgs. 50 t.

Tallow—
New York, 97 bds. Wilson, Sons, & Co., Ld.
Boston, 1,185 tcs. "
Dunkirk, 9 cks. "
St. Petersburg, 50

Tar—
Amsterdam, 1 ck. J. M. Hamilton & Co.

Tartar—
Bordeaux, 1 ck. Helmsing & Son

Tartaric Acid—
Bari, 28 cks. Wilson, Sons, & Co., Ld.
" 3

Treacle—
New York, 1,000 brls. Wilson, Sons, & Co., Ld.
Boston, 150 "

Ultramarine—
Rotterdam, 2 cks. Hutchinson & Son
Bremen, 12
Rotterdam, 1 W. & C. L. Ringrose

Varnish—
New York, 18 brls.

White Lead—
Amsterdam, 39 cks. W. & C. L. Ringrose

Wood Pulp
Konigsberg, 50 bls. Bailey & Leetham
Helsingfors, 125 J. Good & Sons

Zinc Ashes—
Amsterdam, 8 cks. Hutchinson & Son

GLASGOW.

Week ending October 8th.

Acetic Acid—
Rotterdam, 7 cks.

Alkali—
Rotterdam, 20 cks.

Barium Chloride—
Rotterdam, 6 cks. J. Rankine & Son

Barytes—
Hamburg, 1 ck.

Castor Oil—
Marseilles, 362 brls.

Chemicals *(otherwise undescribed)*
Rotterdam, 1 ck. 5 cs. J. Rankine & Son

Colours—
Hamburg, 5 cks. 1 cs.
Rotterdam, 6 pks.

Cream of Tartar—
Marseilles, 10 cks.

Dyestuffs—
Alizarine
Rotterdam, 8 bxs. 6 brls. J. Rankine & Son
" 162 pks.
Madder
Marseilles, 7 brls.
Myrabolams
Bombay, 666 bgs.

Farina—
Delfszyhl, 566 bgs.

Glucose—
New York, 150 brls.

Glue—
Rotterdam, 9 cks.
Rouen, 45
Rotterdam, 50 bgs. J. Rankine & Son

Lactic Acid—
Rotterdam, 10 cks. J. Rankine & Son

Paraffin Scale—
New York, 225 brls.

Paraffin Wax—
Rangoon, 562 bxs.

Potashes—
Montreal 20 brls.
Hamburg, 24 cks 44 dms.

Pyrites—
Huelva, 1,803 t. Tharsis Co

Rosin—
New York, 121 brls

Saltpetre—
Hamburg, 2 cks.

Soap—
Rouen, 75 cs.

Sodium Naphthol—
Rotterdam, 2 brls. J Rankine & Son

Starch—
Baltimore, 200 sks.
New York, 250 bgs.

Tallow—
Baltimore, 5 tcs.

Varnish—
New York, 5 brls.

Verdigris—
New York, 2 cks.

Waste Salt—
Hamburg. qty.

White Lead—
Rotterdam, 12 cks. J. Rankine & Son

Wood Pulp—
Sannesand, 800 bls. Wm. Grant & Co.
" 2,080 Hummel & Co.
Christiania, 1,940 7 cs.

Zinc Oxide—
New York, 100 brls.

Zinc White—
Rotterdam, 100 cks. J. Rankine & Son

TYNE.

Week ending October 3rd.

Barytes—
Amsterdam, 268 bgs. Wm. Swanston & Sons
Antwerp, 100 Tyne S. S. Co.

Colours—
Rotterdam, 1 bx. Tyne S. S. Co.

Farina—
Hamburg, 50 bgs. Tyne S. S. Co.

Glucose—
New York, 50 brls. Furness, Withy, & Co.

Glue—
Hamburg, 20 bgs.
Antwerp, 1 ck. Tyne S. S. Co.

Limestone—
Antwerp, 1 crte. Tyne S. S. Co.

Manganese—
New York, 81 pks. Furness, Withy, & Co.

Paint—
Copenhagen, 1 cs.

Pitch—
Antwerp, 3 cks. Tyne S. S. Co.

Pumice Stone—
Hamburg, 42 cs. Tyne S. S. Co.

Rosin—
Wilmington, 4,864 brls.
New York, 200 Furness, Withy, & Co.

Salt—
Harburg, 180 t. Clephans & Wiencke

Varnish—
New York, 1 brl. Furness, Withy, & Co.

GOOLE.

Week ending September 30th.

Alizarine—
Rotterdam, 13 cks.

Alkali—
Calais, 14 cks.

Aniline—
Rotterdam, 270 cks. 50 cs.
Hamburg, 10 1

Antimony—
Boulogne, 4 cks.

Barytes—
Rotterdam. 12 cks.

Caoutchouc—
Boulogne, 6 cks.

Dyestuffs *(otherwise undescribed)*
Rotterdam, 3 cks.
Boulogne, 79

Farina—
Harlingen, 300 bgs.
Delfszyhl, 450

Logwood—
Belize, 420 t.
Hamburg, 5

Madder—
Rotterdam 2 cks. 1 pk.

Potash—
Dunkirk, 6 cks.
Calais, 6 dms.

Pyrites—
Huelva, 700 t.
Pomaron, 1,000

Saltpetre—
Rotterdam, 100 bgs.
Hamburg, 1 ck.

Soda—
Rotterdam. 4 cks.

Starch—
Ghent, 180 cs.

Waste Salt—
Hamburg, 241 cks. 150 t.

GRIMSBY.

Week ending October 3rd.

Albumen—
Hamburg, 5 cks.

Caoutchouc—
Rotterdam, 3 cs.
Hamburg, 2

Chemicals *(otherwise undescribed)*
Antwerp, 16 cks.
Rotterdam, 10
Hamburg, 5 3 cs.

Colours—
Hamburg, 28 cks. 3 cs.
Gothenburg, 1
Antwerp, 17 24 pkg.
Rotterdam, 1

Dyes—
Hamburg. 12 cks.
Hamburg, 20 41 cs.

Dyestuffs *(otherwise undescribed)*
Dieppe, 95 cks.

Glue—
Dieppe, 13 cks.

Zinc Ashes—
Antwerp, 8 cks.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 7th.

Acetic Acid—
Wellington, 3 c. £10

Acids—
Adelaide, 30 cs. £42
Bombay, 10 c. 16

Alum—
Cape Town, 1 t. 1 c. £8

Ammonia—
New York, 53 brls. £318
Cadiz, 4 c. 20

Ammonium Carbonate—
Rouen, 5 t. 10 c. £140
Yokohama, 6 158
Bombay, 10 16
Rotterdam, 22 cks. 30 kgs. 145

Ammonium Chloride—
Sydney, 7 t. £143
Rotterdam, 9 cks. 59
B. Ayres, 11 c. 17

Ammonium Sulphate—
Havre, 102 t. 13 c. £780
Sydney, 13 20
Bordeaux, 22 7 170
Hamburg, 50 380
Bremen, 176 1,205
Antwerp, 145 1,160

Amorphous Phosphorus—
Sydney, 1 c. £13

Antimony Sulphide—
Philadelphia, 1 t. 3 c. £39

Arsenic—
E. London, 2 t. £25

Bisulphite of Lime—
Calcutta, 3 t. 8 c.

Bleaching Powder—
Algoa Bay, 2 t.

Boracic Acid—
Wellington, 2 t.

Borax—
Melbourne, 30 kgs.
Hong Kong, 22 c.

lic Acid—

lona,	10 cks.	£65
rleans,	96	724

n Bisulphide—

burg,	18 dms.	£70

nic Acid Gas—

y,	30 tubes.	£11

ic Soda—

,	7 c.	£8
ane.	16 t. 13	117
lizabeth,	3 6	73
ndon,	2 2	46
ngton,	7	7
n,	3 3	29
Bay,	1 8	24

icals *(otherwise undescribed)*

ica,	1 cs	£13
hama,	20 cks.	136
y,	2 kgs.	14
burg,	1	10
ide,	34 pks.	43
le Janeiro,	14	11
gne, 6 cs.		21
,	14	24
ey. 26		221
land,	11 31	65
tta. 3		29
ghai,	7	15
rara,	120	37
ane,	23	44

oform —

lona,	2 cs.	£7

Acid—

burg.	20 kgs.	£131
lona,	13 c	73
land,	3 crts. 1	15
,	4	24
ourne,	10	63
edam,	9	59
els,	1 ck 6	70
erp,	1 t.	126
bay,	8	26
gne.	3	21
rdam	10	63
etersburg,	2 t.	261
	2	15
achee,	1 ck.	7
Town,	3	20

Products —

izarine

York,	35 cks.	£474

iline Dyes

le Janeiro,	1 cs.	£9

iline Oil

erdam,	23 dms.	£1,200
ourne,	1 cs.	25
kirk,	10	520

inzol

burg,	45 cks.	£180
terdam,	10 puns.	90
gne,	6 20	2 3
erdam,	23 dms	6 0

eosote

York,	3 cs.	£30

phtha

ington	40 dms	£21
ourne.	20 cs.	22

phthaline

burg,	13 cks.	£113

tch

utta.	6 pks.	£6
goon,	15 cks	9
York,	640 1,100 brls.	958
ifax,	4	4
e,	1,100 t.	1,950
werp,	420	777
ras,	10 rnlts.	6
Nazaire,	140	200
Orleans,	750 cs.	428

yridine Bases

burg,	4 dms.	£142

ar

Elizabeth,	120 dms	£5
goon,	15 cks.	11
singfors,	200 brls.	110
London,	400	48
al,	255	93

ber Sulphate—

ssels,	2 t.	£34
al,	1 cs.	10

m of Tartar—

kland,	10 c.	£45
lson,	15	70
Yokohama,	2 t.	200
Wellington,	1	96
Algoa Bay,	1 cs.	11
Cape Town,	5	22
Libau,	6 cks.	65
Hobart,	5 kgs 2	23

Disinfectants—

E. London,	14 cks.	£20
Hamburg,	50	250

Guano—

Guadeloupe,	360 t.	£3,600
Paris,	30	240
Landerneau,	305	2,050
Genoa,	100	1,000

Manure—

Torrevieja,	7,518 bgs.	£2,963
Paris,	23 t. 7 c.	85
Rostock,	400	1,030
Azores,	14 11	70
Demerara,	155 10	430
Rotterdam,	109 4	550
Malaga,	299	2,392

Potassium Bichromate –

Paris,	5 t. 5 c.	£203

Po assium Chlorate –

Cape Town,	2 t.	£79
Calcutta,	10 c.	19

Potassium Cyanide—

Townsville,	6 t. 5 c.	£517

Potassium Prussiate –

Philadelphia,	10 cks.	£182
Brussels,	7 c.	20
Yokohama,	1 t	56
Antwerp,	6	330
St. Petersburg,	1	50
Danzig,	20	300
Rotterdam,	21	338

Saltpetre –

Santos,	2 t. 10 c.	£56
Nelson,	5	7
Rio de Janeiro,	8 3	183
Hamburg,	1 15	31

Salts of Potash—

D lagoa Bay,	16 t. 13 c.	£1,386

Sheep Dip—

E. London,	19 t. 18 c.	£612
B. Ayres,	200 dms. 120 cs.	200
Algoa Bay,	200	388
M. Video,	100	300

Soda Crystals—

Nelson,	3 t. 5 c.	£8

Sodium Bicarbonate—

Nelson,	2 t.	£15
Auckland,	4	24
Natal,	4	13

Sodium Bichromate—

Dunkirk,	6 t 10 c.	£210

Strontium Nitrate—

Calcutta,	10 c.	£13

Sulphuric Acid –

Singapore,	10 cs.	£10
Cape Town,	1 t. 10 c.	15
E. London,	1 18	19

Tartaric Acid—

Lisbon,	5 c.	£32
Melbourne,	1 t. 15	915
Nelson,	2	16
Yokohama,	9	55
Cape Town,	3	15
Otago,	3	20

LIVERPOOL.

Week ending October 7th.

Alkali—

Montreal,	100 cks. 75 kgs.	

Alum—

Galatz,	9 t.	5 c.	1 q.	£54
Montreal,	7	12	3	37
Ibrail,	3	11		19
Cape Town,	1	10		8
Piræus,	1	10		8
Constantinople,	9	16	2	46
Varna,	4	8	2	20
B. Ayres,	1	9		9

Ammonia (Liquid)—

Antofagasta,	2 c.	£7

Ammonium Carbonate—

Lisbon,	1 t.			£30
Rosario,		7 c.	3 q.	9
Helsingborg,		16		28
Naples,		8		11
Venice,		12		17
Genoa,	3	5		92

Ammonium Chloride—

Lisbon,		9 c.		£16
Philadelphia,	13 t.		2 q.	973
Patras,		11	3	20
Alexandria,	2	10		87
Alexandretta,	1	9		47
Trieste,	1			33
Iquique,		3		6
Stockholm,	2			41
Genoa,	1			20
Montreal,	3	9		70
Ibrail,		10		15
B. Ayres,		5		10

Ammonium Sulphate—

Valencia,	102 t.	4 c.	3 q.	£799
Sourabaya,	33	13	3	275
Nantes	25			203
Bordeaux,	15	2	3	120
Rouen,	13	2	1	115
Philadelphia,	51	16	1	390
La Pallice,	25	17	2	190
Lisbon,	5	1	3	38
San Francisco,	51	5	2	385

Bleaching Powder—

Baltimore,	148 cks.
Boston,	338
B. Ayres,	15
Calcutta,	251 cs.
Carril,	6
Genoa,	30
Ghent,	74
Gothenburg,	19
Konigsberg,	91
New York,	144
Oporto,	8
Paris	20
Rouen.	30

Boracic Acid –

Antwerp,	2 t	7 c.	£71
B. Ayres,	1	4	37
Rotterdam,	2	4	59

Borax —

Quebec,	1 t.	4 c.		£71
Yokohama,	3	8	3 q	57
Antwerp,	4	3	3	75
Hiogo,	3	9		57
Montreal,	10	2		192
Gijon,	3	19	1	75
Rotterdam,	13	15	1	270
Hamburg,	22	6		423
Stettin,		19	3	20
E. London,	2			40
Vera Cruz,		10	3	9
Piræus,		12	2	11
Galatz		10		9
Perth (Australia).		12		10
Fiume,	3	10	1	64
Sydney,	1	1	1	21
Melbourne,	2			40
Delagoa Bay,	25 brls.			50
Genoa,	1 t.	4		23
Trieste,	1	3	1	21
B. Ayres,		5		6

Carbolic Acid—

Hamburg,	1 t.	7 c.		£87
Montreal,	1		1 q.	54
Rotterdam,		2		9
Sydney,	3	3		40

Carbonic Acid Gas—

Maranham,	2 c	£8
Gibraltar,	1	13

Caustic Soda—

Acajutla,	86 dms.
Amsterdam,	161
Antwerp,	35
Baltimore,	50
Barcelona,	260
Batavia,	25
Boston,	250
B. Ayres,	100
Callao,	100
Cartagena,	30
Corunna,	1 cs.
Dunkirk,	35
Fairwater,	35
Galatz,	10
Genoa,	90
Ghent,	8
Hamburg,	68
La Guayra,	20
Leghorn,	10 cks.
Lisbon,	15
Melbourne,	16 pks.
Messina,	15
Montreal,	92
Naples,	21
N. Orleans,	100
New York,	234
Paris,	30
Pernambuco,	25
Philadelphia,	25
Rio de Grande	60
Singapore,	15
Tampico,	15

Chemicals *(otherwise undescribed)*

Antwerp,		10 c.		£17
Alexandria,	1 t.			35
Manila,	1 cs.			34
Riga,	1			30
Odessa.	3	5		91
Sandy Point,			3 q.	5
Quebec,	2	3		11
Genoa,	1 ck.	6		21
Philadelphia,	13	13		448
New York,	1	6	1	80
Boston,	4	6		152

China Clay—

Boston	806 cks.
Pernambuco,	30

Coal Products—

Alizarine Oil

Lisbon,	3 cks.

Aniline Salts

Barcelona,	20 bls.
New York,	42 cks.
Philadelphia,	20 cs. 11 pns.

Anthracene

Rotterdam,	11 cks.

Creosote Oil

Bordeaux,	125 brls.

Pitch

Bilbao,	60 brls
Marseilles,	250 t.

Tar

Bathurst,	5 brls.
Boma,	6 cks.
Callao	20 dms.
C. C. Castle,	10
Cape Lopez,	4
Lagos,	6
Pernambuco	20
Samarang,	18
Sourabaya,	15

Coal Products *(otherwise undes.)* —

Barcelona,	3 cs
Boston,	2 kgs.

Copper Sulphate—

Guayaquil,		12 c.		£16
Braila,	2 t.	10		41
Rouen,	4	18	2 q.	79
Salonica,	1	2		20
Catania,	20	18	1	346
Genoa	3	7	3	54
Naples,	2	3		34
Danzig,	1	1	2	16
Piræus,	1	4		18
Ghent,	4	19		81
Paris,	35	6	3	524
B. Ayres,	1			17
M. Video,	18	3	2	291

Copperas—

M. Video,	3 t.	19 c		£4
Varna,	3	10	1 q.	8
B. Ayres,		4	1	2

Disinfectants—

Salt Pond,	10 cs.		£23
Cape Town,		9 c.	15

Lime—

Accra,	50 brls.	£8

Magnesia—

Havana,	4 cs.
Lisbon,	10
New York,	1

Magnesium Chloride—

Rouen,	10 t.	2 c.	2 q.	£25

Magnesium Sulphate –
Rosario, 2 t. 1 c. 2 q. £9
Manure—
Rouen, 15 t. £87
New York, 5 1 q. 62
Marseilles, 58 1 c. 176
Havre, 150 1 675
Genoa, 98 10 2 234
Valencia, 30 1 121
Oxalic Acid—
Lisbon, 12 c. 3 q. £18
Boston, 15 t. 1 30
Paint—
Accra, 6 cks.
Algoa Bay, 2
Amsterdam, 6 kgs. 6 dms.
Antwerp, 10
Barcelona, 6
Boma, 11
Calcutta, 120 60
Callao, 164 cs. 14
Cape Town, 8
Colon, 7
Gibraltar, 6
Halifax, 4 brls.
Hamburg, 8
Havana, 20 cs. 5
Hong Kong, 1 43
Ibrail, 35
Iquique, 500 35
Lagos, 20
Lanzarote, 54
Lisbon, 14 brls. 4 60
Loango, 20
Madras, 8
Manaos, 1 cs. 1
Mayaquez, 2
Monrovia, 8
M. Video, 20
Montreal, 78 26
New York, 2 30
Old Calabar, 9
Panama, 6
Pernambuco, 2 brls.
Ponce, 2
Rio de Janeiro, 50 dms.
Rotterdam, 3 brls.
St. John, N'fld., 5 10
San Sebastian, 2 dms.
Sierra Leone, 18
Tampico, 9
Trieste, 12 3
Painters' Colours—
Antofagasta, 10 cs.
Bahia, 12 brls.
B. Ayres, 2 cks. 59 pks.
Lagos, 5 7 brls 4
New York, 28
Para, 9 1
Rotterdam, 2 dms.
St. Thomas, 9
Samarang, 5
San Juan, 90 kgs. 24
Sourabaya, 5
Tampico 6
Paraffin Wax—
Genoa, 30 cs.
Leghorn, 49 bgs.
Naples, 69
Phosphorus—
Sourabaya, 3 c. £40
Shanghai, 18 180
Hong Kong, 2 25
Hiogo, 15 150
Potash—
B. Ayres, 1 c. £4
Potassium Bichromate –
Antwerp, 4 t. 2 c. £164
Hong Kong, 2 1 q. 5
Potassium Carbonate –
New York, 18 t. 9 c. £330
Potassium Chlorate—
Hiogo, 10 t. £369
Galatz 3 47
Shanghai, 5 195
Hamburg, 4 12 c 60
Rosario, 1 5 1 q. 47
New York, 3 15 141
Antwerp, 1 37
St. Petersburg, 15 383
Rotterdam, 16 34
Gutujewsky, 17 690
Tampico, 10 18
Philadelphia, 5 195
Ghent, 1 39
Lisbon, 1 39
Potassium Prussiate—
Oporto, 4 c. £17
Salt
Accra, 5 t. 11 c.
Alexandretta, 1,000 bgs.
Algoa Bay, 15 15
Ambrizette, 7 2
Antwerp, 241 18 1
Barbadoes, 100
Boma, 25
Bomaka, 7
Boston, 179 10
Brunswick, 1,100
B. Ayres, 80
Calcutta, 1,978
C. C. Castle, 32 10
E. London, 83 14
Egwanga, 30
Ghent, 240
Halifax, 10
Karachi, 2 3
Manaos, 1
Mandiji, 18 6
Matadi, 37 10
Melbourne, 40
Mobile, 251
Monrovia, 15
Montreal, 75 18
Muculla, 7 2
New York, 105
Old Calabar, 30 2
Para, 11,397
Rangoon, 100
Rio de Janeiro, 9 11 50 cs.
Rosario, 100 cks.
Sydney, 225 t.
Trinidad 35 10
Victoria, W.C A.. 6 12
West Point, 2,000
Salt Cake—
Sydney, 3 t. 3 c. £14
Antwerp, 150 195
Genoa, 25 1 46
Saltpetre—
Parnahyba, 5 c. £6
Iloilo, 7 2 q. 9
Maranham, 1 t. 3 2 30
Cartagena, 3 70
Satinite –
Calcutta, 4 t. 5 c. £11
Sheep Dip –
B. Ayres, 93 t. £1,895
Soap—
Akassa, 18 bxs.
Alexandria, 20 50 cs.
Algoa Bay, 276
Amsterdam, 515
Antwerp, 100 2 kgs.
Assinee, 100
Athens, 7
Bangkok, 70
Barbadoes, 201
Barranquilla, 4
Batavia, 1,000
Boma, 960
Bombay, 11
Boston, 500
Calcutta, 70
Cameroons, 240
C. C. Castle, 100 151
Cape Town, 831
Cartagena, 10
Ceara, 1
Copenhagen, 102
Curacao, 100
E. London, 70
Genoa, 200
Gibraltar, 322 70
Hamburg, 250 bdls.
Hong Kong, 400 10
Karachi, 500 15
Lagos, 330
Madras, 4
Malta, 49
Manaos, 50
Matadi, 20
Montreal, 550
New York, 4
Pt. Elizabeth, 25
Pt. Natal, 340 100
Punta Arenas, 25
Rangoon, 2
Rio de Janeiro, 2
St. John, N.B., 225
St. John's N'fd., 221
St. Thomas, 1
Shanghai, 6,010
Sydney, 3,500
Teneriffe, 2
Trieste, 4
Trinidad, 250
Valparaiso, 4
Soda Alkali –
Barcelona, 35 brls.
Leghorn, 117
Montreal, 100
New York, 33 50 bxs.
Soda Ash—
Aalborg, 200 bgs.
Amsterdam, 15 cks. 250
Antwerp, 610
Baltimore, 240
Barcelona, 10
Bari, 700
Bombay, 8
Boston, 69 17 tcs. 280
B. Ayres, 49 brls.
Calcutta, 156
Calmar, 100
Canea, 50
Copenhagen, 180
Corfu, 30
Genoa, 20 226
Gijon, 4
Gothenburg, 38 kgs. 100
Hamburg, 141 200
Konigsberg, 5
Leghorn, 80
Montreal, 107 75 tcs. 780
Naples, 60
New York, 232 1,908
Philadelphia, 324 2,000
Rio de Janeiro, 100
St. Petersburg, 100
Smyrna, 200
Tampico, 59
Venice, 200
Victoria, V.I., 44
Melbourne, 310
Soda Crystals—
Amsterdam, 20 brls.
Antwerp, 1 ck. 2 bgs.
B. Ayres, 330
Calcutta, 33 kgs.
Cartagena, 20 20
Corunna, 20
Gijon, 12
Malta, 170
Montreal, 216 1,210
New York, 280
Philadelphia, 131
St. John, N.B., 5
Sodium (Metal)—
Rotterdam, 5 t. £805
Sodium Bicarbonate—
Alexandretta, 20 brls.
Algoa Bay, 40 kgs.
Amsterdam, 30
Bombay, 20 bgs. 325
B. Ayres, 200 cks. 50
Calcutta, 6 1,530
Cartagena, 40
Constantinople, 20 brls. 40
Copenhagen, 13
Dunkirk, 7
E. London, 120 bgs. 40
Genoa, 22 70
Gothenburg, 40
Havre, 5
Karachi, 250
Konigsberg, 10
Libau, 700
Madras, 150
Marseilles, 70
Melbourne, 15 8 brls. 240
M. Video, 50
Montreal, 30 90 bgs. 1664
Odessa, 200
Para, 10
Paris, 20
Pt. Natal, 8 20
Quebec, 30 pks.
Rangoon, 6
Rosario, 29 68
R'erdam, 250 15
St. John, N.B., 18
St. Petersburg, 180
San Francisco, 200
Sydney, 100
Trieste, 110
Sodium Bichromate—
Antwerp, 3 cks.
Sodium Carbonate—
Barbadoes, 10 bgs.
Sodium Chlorate—
Naples, 20 brls.
Sodium Hyposulphite—
Dunedin, 4 cks.
Genoa, 70 kgs.
Lisbon, 20
Sydney, 50
Sodium Silicate—
Melbourne, 13 dms.
Messina, 30 cks.
Valencia, 500
Starch—
Oporto, 20 bgs.
Sulphur—
Lagos, 3 c. £1
Boston, 150 t. 6 489
Philadelphia, 125 2 407
Halifax, 2 15 19
E. London, 3 12 18
Sulphuric Acid—
Hamburg, 1 c. 3 q. £5
Superphosphates—
N. Orleans, 1,501 t. 13 c. 3 q. £2028
Bordeaux, 49 5 205
Nantes, 385 9
Tartaric Acid—
Rosario, 1 t.
Varnish—
Accra, 3 dms.
Antwerp, 1 tin
Callao, 4 cs.
Genoa, 3 cks. 2 1
Naples, 3
White Lead—
Gd. Canary, 1 kg.

MANCHESTER.

Week ending October 7th.

Ammonium Carbonate—
Antwerp, 20 kgs.
Hamburg, 25 cks.
Rotterdam, 19
Ammonium Sulphate—
Paris, 917 bgs.
Aniline—
Melbourne, 5 kgs.
Aniline Colours—
Hamburg, 2 kgs. 2 cs.
Rotterdam, 1 1
Aniline Oil—
St. Petersburg, 6 dms.
Benzol—
Rotterdam, 27 dm
Borax—
Melbourne, 1 ck.
Carbolic Acid—
Rotterdam, 25 brls.
Creosote Salts—
Rotterdam, 29 cks.
Treport, 34
Tripoli, 10
Glue—
Antwerp, 10 cks.
Oxygen –
Treport, 71 tubes
Pitch—
Antwerp, 330 t.
Potassium Bichromate—
Melbourne, 1 ck.
Tallow—
Rotterdam, 8 cks.
Tar—
Treport, 30 cks.
Toluol—
Rotterdam, 23 dms.
Verdigris—
Melbourne, 2 cks.

HULL.

Week ending October 3rd.

Alkali—
Abo, 4 cks.
Hamburg, 1
Reval, 10 dms.
Constantinople, 150
Trieste, 6
Ammonium Sulphate –
Dunkirk, 185 bgs.
Palermo, 240
Stettin, 500
Benzol –
Rotterdam, 23 cks.
Bleaching Powder—
Stettin 30 cks.
Venice, 12
Caustic Soda—
Abo, 4 cks.
Antwerp, 10 dms.
Bari, 30
Helsingfors, 8 cs.
New York, 52
Reval, 80
Wyburg, 60
Chemicals (*otherwise undescribed*)
Antwerp, 2 cks.
Bergen, 5 cks. 1 2 pkgs.
Bremen, 4
Christiania, 728 slbs. 4 11
Copenhagen, 24 cks. 8 25
Gothenburg, 3 24
Hamburg, 74 150
Helsingfors, 10
Konigsberg, 7 12
New York, 147 50 46
Odessa, 7 57
Riga, 38

terdam, 38 70
ranger, 11
tin, 49 11 15
Petersburg, 16 1
ste, 49
kholm, 5

onseed Oil –
sterdam, 1,843 c.
werp. 854
stiania. 42
enhagen, 201
kirk 230
enburg. 50
burg, 598
erdam, 704
lin, 404
kholm, 62

tuffs *(otherwise undes.)*—
terdam 13 cks
werp. 1
ingfors, 50
, 6

o—
kirk 35 t.

Oxide –
yres, 600 cks.

eed Oil –
verp, 42 c.
7
en, 11
stiania, 492
stiansund, 42
stiansand, 35
tantinople, 105
nhagen, 28
theim, 113
burg, 103

ers' Colours –
terdam, 1 ck.
verp, 70 88 pks.
5 3 kgs.
en, 48 dms. 1 1 cs
stiania, 3 80
40 dms.
nhagen. 1 1 1
50 dms.
theim, 6
enburg, 1 5 dms.
t, 6 3
burg, 22 6
esberg, 20
York, 95
sa, 30
erdam. 1
in. 47
etersburg, 7 2
tholm, 30 1
ce, 19
—
erp. 55 t.
und 10 c.
—
en, 1 ble.
theim, 1 cs.
enburg, 1
York, 500

h—
tiania, 10 bls.

w—
erdam, 9 cks.
enburg. 10
burg, 1
urg, 4
erdam, 6 cks.
verp, 6
burg, 10
en, 3
etersburg, 100 brls.

ish—
erdam, 3 cs.
tiania. 1 ck.
nhagen, 1 2
enburg, 1
burg, 1 1 dm.
rdam, 1
n, 10
holm, 3

GLASGOW.

Week ending October 8th.

onium Chloride—
9, 6 t. 4 c.

onium Sulphate—
lona, 104 t. ½ c.
llon, 76 9½
Pedro
d'Alcantara, 10 6
cia, 387 16¼
ice, 57 8
rara, 126 ¾
Leghorn, 50 2½
Nickerie, 25 7

Bleaching Powder—
Sydney, 10 t. 4 c.

Carbonic Acid Gas—
Rangoon, £122

Castor Oil—
Freemantle, £60
Sydney, 70

Caustic Soda—
New York, 44 t. 10 c.

Coal Products—
Aniline Colours
U.S.A., £70
Creosote Oil
Christiania, £14
Naphthaline
Duisberg, 135 t.
Pitch
U.S.A., £15
Avilles, 857
Canada, 50
Catania, 28
Genoa. 421
Gothenburg, 176
Santander, 852
Tar
Christiania 100 brls.
Cronst dt, 434
Rotterdam. 100
Tar Acids
U S A, £32

Coal Products *(otherwise undes)*—
Rotterdam, £315

Dyestuffs—
Extracts
Coburg, £78
Hamilton, 166
Hespeler, 34
Waterloo, 80
Barcelona, £24. 19s.
Toronto. £132
Turmeric
Montreal, £20

Dyestuffs *(otherwise undescribed)*
U.S.A., £45

Gelatine—
Canada, £145

Guano—
San Pedro D'Alcantara, 60 t. 5¾ c.

Lime—
St. Croix, 53 t. 17¾ c.

Linseed Oil—
Transvaal, 2 t. 12 c.
B. Ayres, 5 8½
Canada, 12 9¾
Sydney, 16 1¾
Trinidad. 11 5
Jamaica, 12

Litharge—
Johannesburg, £21
Montreal, 202

Magnesium Sulphate—
Christiania, £35
Sydney. 44

Manganese—
Rotterdam, 1 t. 5 c.

Manure –
Spain, £70
Demerara, 40 t.
Trinidad 25 6½ c.

Paint—
Azua, £40
Calcutta. 340
Maracaibo, 83
Sydney, 97

Painters' Colours—
Calcutta £958
Cape Town, qty.
Demerara, ,,
Trinidad, 110
Rangoon, 117
Barbadoes, ,,
Kingston Jam., £16. 10s.
Sydney, £76
Trinidad, ,,
Nickerie, 50

Paraffin Wax—
Cape Town, £52
Christiania, 41
Barcelona, 295
Santander. 20
Palermo, 28

Potash Salts—
Natal, 5 t. 19½ c.

Potassium Bichromate—
Canada, £171
Montreal, 416
Christiania, 198
Rotterdam, 194
Barcelona, 1,311
Antwerp, 396
Genoa, 22
Leghorn, 302

Potassium Chlorate—
Sydney, 7 t. 13¾ c.

Salt—
B. Ayres, 5 t. 2½ c

Sheep Dip—
B. Ayres, £143

Sodium Bichromate—
Canada, 1 t. 5¼ c.
Montreal, 3 4¾
Barcelona, 25 7¾
Genoa. 5 10¾
Leghorn, 1 13¾

Starch—
Rotterdam, 3 c.
Barcelona, £45

Sulphur—
Trinidad, 5 t. 16 c.

Sulphuric Acid –
Durban, £25
Rangoon, 409

Tallow—
Transvaal, £10

Treacle—
Algoa Bay, 4 t. 2 c.
Pretoria, 2
Christiansand, 2 12
Gothenburg, 81 4¾

Varnish—
Calcutta, £20. 15s.
Toronto, £34

White Lead –
Sydney, £71

Zinc Ashes –
Rotterdam, 10 t. 5 c.

TYNE.

Week ending October 3rd.

Alkali—
Antwerp 5 t. 15 c.
Hamburg, 1 13
St. Petersburg, 53 11
Amsterdam, 12 2

Alum Waste –
Horsens, 10 t. 9 c.

Ammonia (Liquid)—
Aarhuus, 3 c.

Ammonium Sulphate—
Odense, 5 t.

Antimony—
St Petersburg, 15 t.
Montreal, 2
Rotterdam. 5 7 c.

Barium Binoxide—
Genoa, 2 t. 12 c.

Barium Carbonate—
Hamburg, 150 t.

Bleaching Powder—
Amsterdam, 4 t. 10 c.
Christiania, 22 1
Antwerp, 61 16
Hamburg. 30 5
Rotterdam, 22 15
St. Petersburg, 135 18
Copenhagen, 15 5
Abo, 40 6
Helsingfors, 17 8
Drontheim, 9 18

Caustic Soda –
Genoa, 42 t. 5 c.
Arendal, 4 7
Antwerp 112 7
Hamburg, 49 11
Aarhuus, 1 3
Odense, 1 9
St Petersburg. 100 2
Copenhagen, 3
Libau, 19 19
Abo 2 15
Helsingfors, 20 10

Farina—
Bergen, 4 t.

Litharge—
Montreal, 20 t. 2 c.
Hamburg. 1 13
Rotterdam, 2 1
Copenhagen, 1 8

Magnesia—
Hamburg, 4 t. 3 c.
Barcelona 6 3
St. Petersburg, 3 15
Libau, 3
Odessa, 2

Manure—
Genoa, 35 t.

Ochre—
Drontheim. 16 c.

Oxalic Acid—
Barcelona, 5 t. 5 c.

Paint—
Christiania, 3 c.
Antwerp, 9
Hamburg, 1 t.
Rotterdam, 10
Abo, 10

Phosphorus—
Genoa. 1 t. 16 c.

Potassium Chlorate—
St. Petersburg, 5 t. 9 c.

Pyridine—
Hamburg, 1 t. 1 c.

Soda—
Christiania, 20 t.
Antwerp, 5
Aarhuus, 5
Rotterdam, 20 4 c.
Smyrna, 8 2
Esbjerg, 79 13
Bergen, 5 3
Christiansund, 14 15

Soda Ash—
Laurvig, 10 t.
Gothenburg, 25 9 c.
Copenhagen, 13
Abo, 67
Helsingfors. 30 1

Sodium Hyposulphite—
Montreal 10 t.

Sodium Sulphate—
Aalborg, 2 t. 10 c.

Sulphur—
Laurvig, 350 t.
Rotterdam, 2 10 c.

Tallow—
Genoa, 13 t. 13 c.

White Lead—
Montreal, 25 t. 8 c.
Courseulles, 1 q
Helsingfors, 14
Copenhagen, 2 15

GOOLE.

Week ending September 30th.

Benzol –
Amsterdam, 11 dms.
Boulogne, 25 cks.

Chemicals *(otherwise undescribed)*
Amsterdam, 4 cks.
Hamburg, 18
Rouen. 6
Harlingen, 24 20 cbys.

Coal Products *(otherwise undes.)*—
Antwerp, 2 cks.
Boulogne, 54
Ghent, 10
Hamburg. 8
Rotterdam, 2 1 cs.

Colours—
Amsterdam, 1 ck.
Ghent, 1 2 dms.
Harlingen, 21
Boulogne, 2 1 cs.

Dyestuffs *(otherwise undescribed)*
Ghent 7 cks. 1 cs.
Hamburg, 60

Manure—
Rouen, 250 bgs.

Pitch—
Antwerp, 488 t.

Soap—
Antwerp, 18 cs.

GRIMSBY.

Week ending October 3rd.

Chemicals *(otherwise undescribed)*
Hamburg, 21 drs. 10 btls.

Coal Products *(otherwise undes.)*—
Dieppe, 112 cks.
Hamburg, 5

Colours—
Antwerp, 3 cks.
Hamburg, 6 4 pks.

Dyestuffs *(otherwise undescribed)*
Dieppe, 1 cs.

Manure—
Dieppe, 100 bgs.

Soap—
Hamburg, 5 cs.

PRICES CURRENT. WEDNESDAY, OCTOBER 14TH, 1

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 %, and 40 % .. .. per cwt.	5/10½ & 8/		
,, Glacial .. .. ,,	40/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B .. .. per lb.	0	0	2¾
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	8	9
,, ,, (grey) Hull .. .. ,,	7	5	0
Aniline Oil (pure) .. .. per lb.	0	0	10½
Aniline Salt ,, ... ,,	0	0	9½
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	4	9
,, 50/90 ,, ... ,,	0	3	3
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	6½
,, (crude 60°) .. .. per gallon	0	1	9½
Creosote (ordinary) .. .. ,,	0	0	1½
,, (filtered for Lucigen light) .. .. ,,	0	0	2
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. ,,	0	0	0
Copper .. .. per ton	46	17	6
,, Sulphate .. .. ,,	16	0	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	40	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	10	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	14	15	0
,, *Carbonate (white lead) pure* .. .. .. ,,	16	0	0
,, *Nitrate* .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	7	
,, ,, (grey) (ex ship .. .. ,,	8	1	
Magnesium (ribbon and wire) .. .. per oz.	0	1	
,, Caloride (ex ship) .. .. per ton	2	7	
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magnesia .. .. per ton.	8	15	
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	
Manganese, Sulphate .. .. ,,	16	10	
Borate .. .. per cwt.	2	10	
,, Ore, 70 % .. .. per ton	3	12	
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	
Naphtha (Wood), Solvent .. .. ,,	0	1	
,, ,, Miscible, 60° O.P .. .. .. ,,	0	1	
Oils:—			
Cotton-seed .. .. per ton	17	0	
Linseed .. .. ,,	18	10	
Petroleum, American .. .. per gallon	0	0	
Stearine .. .. per ton	20	10	
Phosphorus (yellow) .. .. per lb.	0	1	
,, (red) .. .. ,,	0	2	
Potassium (metal) .. .. per oz.	0	1	
,, Bichromate .. .. nett per lb.	0	0	
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	
,, Chlorate .. .. per lb.	0	0	
,, Cyanide, 98% .. .. ,,	0	1	
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	
,, Nitrate (refined) .. .. per cwt.	1	1	
,, Permanganate .. .. per cwt.	3	17	
,, Prussiate Yellow .. .. per lb.	0	2	
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	
Silver (metal) .. .. per oz.	0	2	
Sodium (metal) .. .. per lb.	0	2	
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	10	
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	
,, Acetate (ex-ship) .. .. ,,	14	7	
,, Arseniate, 45 % .. .. ,,	14	10	
,, Chlorate .. .. per lb.	0	2	
,, Borate (Borax) .. .. net, per ton.	20	2	
,, Bichromate .. .. per lb.	0	2	
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	
,, Bicarbonate .. .. ,,	0	10	
,, Hyposulphite .. .. ,,	5	5	
,, Manganate, 25% .. .. ,,	15	0	
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	30	0	
,, Phosphate .. .. ,,	12	10	
,, Silicate (glass) .. .. per ton	4	10	
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	
,, Stannate, 40 % .. .. per cwt.	3	2	
,, Sulphate (Salt-cake) .. .. per ton.	0	19	
,, ,, (Glauber's Salts) .. .. ,,	1	10	
,, Sulphide .. .. ,,	6	15	
,, Sulphite .. .. ,,	5	0	
Strontium Hydrate, 100% .. .. ,,	8	0	
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	
,, Barium, 95 % .. .. ,,	0	0	
,, Potassium .. .. ,,	0	0	
Sulphur (Flowers) .. .. per ton.	7	0	
(Roll Brimstone) .. .. ,,	6	5	
,, Brimstone: Best Quality .. .. ,,	4	12	
Superphosphate of Lime (26% .. .. ,,	2	15	
Tallow .. .. ,,	15	10	
Tin Crystals .. .. per lb.	0	0	
,, English Ingots .. .. per ton	61	0	
Zinc (Spelter) .. .. ,,	16	7	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	

THE

CHEMICAL TRADE JOURNAL

AND

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CURRENT TOPICS.

PREVENTION AND TREATMENT OF GASEOUS POISONING.

THREE weeks ago we made a declaration of our position in regard to this subject, and intimated our intentions there anent. In this issue our readers will find the fulfilment of the same.

The subject is one which is of growing *importance*. It has passed the merely interesting stage.

It is more than probable that sooner or later Government will interfere still further with those industries in which gassing fatalities have been found to occur. One of our preponderating objects has been to forestall in some degree any action that may be taken by the Home Office—not in any antagonistic spirit, but rather one of commendable emulation.

It will be as well to at once point out that when this move comes to be made it will not be the chemical industries that will suffer most, or be most closely scrutinised.

The dangers of the trade are now well known, and by the time the overhauling process begins chemical manufacturers will have put their houses fairly well in order. We have, therefore, not prepared these rules, which are now presented, so as to be solely helpful to chemical manufacturers, but also to the sewering or scavenging departments of corporations and local boards, brewers, colliery managers, the chlorinating departments of gold mines, gas managers, and others.

Some of those we have named naturally lie beyond the direct reach of the *Journal*, extensive though it be, and on this account we wish it to be widely and clearly understood that we shall be pleased to send a copy of this issue to any person whose name and address is sent to us on a post card by any of our readers, at home or abroad. Reprints are also being prepared.

For the immediate benefit of the chemical industries we are also preparing the rules, on displayed posters, of such size that the rules shall be very legible. Particulars concerning these and also the reprints will be found in our advertisement columns. The rules have been copyrighted.

There is just one other point, which though left until last, is still the one thing in which we earnestly seek the co-operation of our readers. Now that this matter has been placed on a public foundation we invite particulars of any accidents that occur, so that the rules may from time to time be amended and perfected to meet all cases and conditions. Such communications may be of a private nature, and not necessarily intended for publication, though of course this should always be made clear. This invitation does not impose a hardship or entail what can seriously be called trouble, but its acceptance will accomplish more than many can conceive —will readers please bear it in mind when the occasion befalls.

ELECTROLYSIS IN CANADA.

Since the captivation of Niagara, Canada has bid fair to be the centre of most manufacturing industries in which electrolysis plays a leading part.

Numerous experiments have been in progress near the falls and also at Quebec, and one of these, we learn on good authority, has blossomed into a company for the electrolytic production of chlorate of potash.

The capital of the company is £60,000., and the provisional directors are Mr. Edward Michael, and the Hon. Tracy C. Becker, of Buffalo, N.Y., Mr. F. P. A. Franchot, Orleans, and Mr. W. T. Gibbs, of Buckingham, Quebec. Certain United States and Canadian patents have been acquired, and the erection of a 2,000 kilowatt plant (2,666 h.p.) commenced at Niagara Falls, the electric power being taken direct from the Niagara Falls Power Company. The result of a trial run extending over two months was reported by Dr. R. A. Witthouse, of New York to be 4·386 pounds of potassium chlorate per 24 electric h.p. hours.

Another departure has been the acquirement of the site and water power of the Buckingham Pulp Company, whose works were destroyed by fire two years ago. At these works it is proposed to manufacture metallic sodium and magnesium, calcium carbide, silicon copper, and ferro-chrome, particular attention being paid to and expectations entertained about the last-named product. Already power has been developed to the extent of 898 electric horse-power, and there is water-power available for 6,000 horse-power if required. It is confidently anticipated that the current will be switched on to the manufacturing plant well on this side of the New Year.

MESSRS. LYSAGHT DECIDE TO MOVE.

IN addition to the Wolverhampton Town Council the Wolverhampton Trades Council has preferred a request to Messrs. Lysaght (Limited) to reconsider their proposal of removing their business from that town to Newport (Mon.) The following letter has, however, been received by the secretary of the Trades Council from the chief office of the company at Bristol, showing that the firm have irrevocably decided to place their business near to the sea coast:—"Dear sir,—The directors of my company have only to-day had the opportunity of discussing your letter of the 17th ultimo, and they offer your council their apologies for the delay. I am requested to thank your council for the interest they have taken in the subject of the removal of the works from Wolverhampton, and to inform you that the arrangements for leaving the town are so far advanced that it is not now possible to re-open the question. The removal to South Wales will probably take three or four years to complete, and you may be assured that the company will do their utmost to render any inconvenience to their employés that the change may entail as light as possible.—Yours faithfully, (John Lysaght, Limited), S. R. Lysaght, Managing Director."

The Radiaphone.—It is reported from an American source that Prof. Alexander Graham Bell is devoting his attention to the commercial development of his "radiaphone," which he devised nearly 20 years ago. In this instrument he utilises a beam or ray of reflected light for the transmission of sounds between distant points in lieu of the ordinary wire. The transmitter is made up of a thin diaphragm of mica or of some other similar substance, silvered at its back so as to make a reflecting mirror of it. The diaphragm is connected with an ordinary speaking tube. Against this thin disc or diaphragm is projected a ray of light. The light is caught by a mirror, and directed through a concentrating lens whose focus is the transmitting diaphragm. The latter in turn reflects the ray through a second lens, which again makes the ray of light parallel, so that it may travel without dispersion. At the receiving station there is a parabolic reflector, at the end of which is fixed a selenium cell. The cell in turn is connected, telephonically, with the ear. When the ray of light is reflected from the transmitting diaphragm and the operator speaks into the tube joined with the latter, what he says may be clearly and distinctly *heard at the other end* of the line, that is, at the other end of the *travelling ray of light.*

A FATAL ACETYLENE EXPLOSION.

A TERRIBLE explosion occurred at twenty minutes past one Saturday afternoon at the works of M. Raoul Pictet (Institu Pictet) 136, Rue Championnet, Montmartre, Paris, through explosion of a vessel containing acetylene gas. The accident took pl in the gasometer-room, which is a special building over thirty feet h situated at the back of the main portion of the factory, and separ from it by a small courtyard. Only two men were in the gasomete the time, and they were both killed on the spot Their names w Léon Secret and Pièrre Pautre. They were engaged in checkin number of recently returned *bonbonnes*, or cylinders of liqu acetylene gas. It is uncertain how the explosion occurred, bu present it is attributed to a leakage igniting at the open flame of a la The walls of the building were blown down, and the neighbou buildings were damaged. Near the gasometer-room there is a s boiler-house, and the stoker engaged there, named Pièrre Ren sixty years of age, was slightly wounded by splinters of glass. In the other buildings of the factory, the engine-house, and the storeho not a pane of glass was left unbroken The courtyards of the adj ing premises are also all strewn with broken glass and with piece masonry belonging to the wrecked gasometer-house. It is astonis that the gasometer itself, which is quite close, did not also blow Had it done so the explosion would have devastated the whole qua The immediate scene of the disaster offered a terrible spect Secret's body had been cut in two, and one of his arms had been off, and was lying about 10ft. away from the rest of his remains. body of the other victim was also torn to pieces Both bodies covered with fine carbon dust.

THE MINERAL PRODUCTION OF INDIA.

FROM Dr. Watt's review of the mineral production of India for past year it appears that the production of coal, though increa with great rapidity, is not keeping pace with the consumption. year the production was 4,370,000 tons, or just 55 per cent. more the previous year (ten years ago the production was just 1¼ mi tons), but the import of coal was 800,000 tons, the largest on re except one year. Dr. Watt reminds us that coal is not used for dome purposes in India, and this growing production and importation s growing industry. The figures, he says, "represent directly magnitude of India's commissariat dealings with the world, the provement in the facilities of internal communication, and the adva ment of her manufacturing enterprise." Fifteen years ago the supply of coal, local and foreign, in India was 1½ million tons; year it was over five millions. The iron industry, on the other ha progresses very slowly, the product last year being only 46,000 t The furnaces are almost wholly confined to Bengal, and to those pl where coal is abundant in the immediate neighbourhood of the ore, where smelting can be carried on by European methods. In Central Provinces ore exists in abundance, but the smelting is pri tive and there are no authentic statistics. In Madras there is abunda of ore but no fuel, while in Bombay there are both ore and fuel. enterprise has not yet been systematically directed to smelting. production of petroleum is almost entirely confined to Assam Burma. The Burma oil wells last year produced 19 million gallo a considerable increase over any previous year – and in Assam already small production decreased. The import of petroleum in In last year was 53½ million gallons, against 86½ the previous year. gold produced was a little under a quarter of a million ounces, val at 175 lakhs of rupees. Mysore contributed the whole of this exce couple of thousand ounces. The Mysore mines cover an area miles long, worked by 11 companies, which give employment to 13,000 men There are 60 shafts, varying in depth from 30 ft. nearly 1,500 ft. The value of the gold produced in India is consi ably more than that of the coal Of diamonds only 215 carats produced last year, valued at less than 20,000 rupees. Jade is most important Indian precious stone in a commercial sense; value of last year's production was 4½ lakhs, and of Burma rubies sapphires nearly three lakhs. Salt, however, is the most importan all the mineral products of India; last year it amounted to 1,266, tons, which considerably exceeds the average for the past five years.

Disastrous Fire and Explosion.—A disastrous fire, follow by a terrific explosion, occurred last week at the stores of Mr. W. Parry, Bethesda. Fire was discovered on the floor of the oil ro and the attempts made to stifle it with old sacks and water failed. quantity of explosives was stored on the premises, and everyone wi a certain radius of the building was warned to clear out. Consequen when the expected disastrous explosion occurred no personal injur resulted. The damage is estimated at £2,000.

THE USE OF OXYGEN IN GASEOUS POISONING.*

PREVENTIVE AND RESCUING APPLIANCES.

INTRODUCTION.

FROM the earliest times, and certainly since the days of Mr. Wm. Gossage's windmill scrubber, gaseous poisoning has been one of the most serious dangers that has menaced workers in

THE CHEMICAL TRADE.

Workers of all classes from the research chemist down to the humblest labourer have at one time or another fallen victims to "gassing." In a large measure it has been this risk that has drawn attention to the chemical industry as a dangerous field of labour. The agitation of the last two or three years has led to the scheduling of a great many trades as "dangerous occupations," and there is no gainsaying the fact that in many details they really are dangerous. It is accredited an honourable and commendable characteristic of Britishers that they have a goodly contempt for danger, but the undue development of this particular trait has done much to heighten the dangers of the chemical trade in the eyes of the general public. When carried to extremes, this tendency soon leads those who are actuated by it beyond the bounds of reason, and pluck dissolves into foolhardiness.

Fig. 7.

THE RESPIRATOR IN USE.

Moreover, the ignorance which abounds concerning the nature of the gases which have proved fatal, and how to deal with them in emergency, has time after time transformed a mishap into a disaster. Great stress has been laid upon this fact in the *Chemical Trade Journal* when occasion has offered, and it was through the same medium that the first successful application of oxygen as a restorative was announced to the trade.

But apart from this, the greatest share of credit is due to Mr. Douglas Herman, who has proved himself the pioneer of this quesion by successfully demonstrating the practicability of what had formerly been mere conceptions and beliefs. His use of oxygen to such good purpose more than three years ago was the foundation of all that has followed.

It has often been contended in these columns that despite all the well meant, if at times grandmotherly solicitude of legislators, the only real help in this and similar matters must come from within the trades affected, rather than from without; and the present attempt to provide

PRACTICAL AND SYSTEMATIC METHODS

of procedure in future accidents is the direct outcome of a settled conviction of the truth of this contention. A secondary, though hardly ulterior object has been to show that bad as the reputation of the chemical trade may be, it has not only stirred itself on behalf of those directly connected with it, but, despite all the unkind, not to say untruthful, things that have been said about it, takes sufficient interest in the welfare of humanity to try and do its best towards minimising the dangers of workers in co-related fields of labour.

The necessity for the inclusion of some outside industries in the propaganda arose from the fact that as the inquiry progressed it was found that some of the worst accidents happened in those works where chemistry played a subsidiary part. Under such conditions the risks of gassing were as great as ever, and the actual danger greater, on

Fig. 8

RESCUE PIPE READY FOR ACTION.

account of the workmen being more than usually ignorant of the nature of the gases, and the treatment of the gassed. Having ascertained for certain that gassing was a danger which affected very closely

WORKERS IN OTHER INDUSTRIES,

it became necessary to modify the scheme as first conceived, and to not only draw up a bare code of rules for chemical works, but enter more fully into the description of rescuing appliances, and the nature of the gases generally met with. In the same way the rules which follow have been framed so as to be applicable as far as possible in all the emergencies that may arise in connection with the daily routine of those engaged in coal mines, breweries, sewers, gas purifying houses, and gasworks, as well as in chemical or quasi-chemical manufacturing operations.

It is neither desirable nor possible for the exact physiological action of the various gases to be gone into here, it being sufficient to merely enumerate the characteristic toxic effects of the gases in the rules themselves. An exception, however, may pardonably be made in the case of carbon monoxide since the recent classical researches of Dr. Haldane have thrown quite a new light on this gas by showing that it really is the most dangerous component of the gaseous mixture known familiarly as afterdamp. The occurrence of this particular gas is

Fig. 6.

THE "RESCUE" RESPIRATOR. THE "POCKET" RESPIRATOR.

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extending, and the important part it plays in afterdamp makes it specially

INTERESTING TO COLLIERY MANAGERS,

and it is as important as interesting, since the coal mining industry is one of those in which more light is needed upon the question of gaseous poisoning. The importance of its bearings on the chemical trade also warrants the exception. In brief, Dr. Haldane has proved that carbon monoxide really does exist in conjunction with free oxygen in afterdamp, and, although deficiency of oxygen is of itself *primâ facie* evidence that death should result, experiment has proved that death is

Fig. 5.

Fig. 9.

more often directly due to carbon monoxide poisoning. In one particular instance, viz., the Tylorstown explosion, last January, there was enough oxygen present to have prevented life becoming entirely extinct, yet there were many deaths all traceable to this direct gaseous poisoning. This is not so difficult to comprehend as is the presence of the uncombined oxygen under such conditions, because it has long been known that carbon monoxide acts as a direct poison, as compared with the indirect

Fig 3.

Fig. 1.

Fig. 4.

action of carbon dioxide, and should therefore be as capable of causing death in the presence of oxygen as prussic acid in the open air. It, however, may be asked: 'What is the good of further oxygen treatment if even a life-supporting proportion of oxygen in the afterdamp is ineffectual in preventing death? Fortunately there is not only a theoretical answer to this query, but, better still, the practical testimony of direct experiment. It must not be forgotten that there is a v difference between the action of a limited and diluted supply of oxyg and that of the *pure* gas, with which the blood is virtually saturat through the lungs Dr. Haldane has, however, rendered all these unnecessary by subjecting himself to the action of the gas, recording symptoms, and successfully dispersing them by the aid of oxygen. I experience shows that a miner does not receive warning of his dan until he is practically past helping himself. Although no effects felt until the gas has been inhaled for about half an ho as soon as the breathing begins to be laboured, weakness sight and giddiness very quickly supervene, and are aggrava by any attempt to move. Dr. Haldane continued inhalation for 71 minutes, his own record, at this, his final stage, be that the blood was very pink, showing 49% saturation, vision was d walking without assistance almost an impossibility, and the moveme very uncertain. After a lapse of a quarter of an hour he could w again, and oxygen was then administered with very sudden s satisfactory results, all the distressing symptoms terminating mediately. It will thus be seen that oxygen is not only capable rendering great service, but will act very speedily even when the bl shows 49% saturation. Is it right, therefore, in future that hope sho

Fig. 2.

Fig. 2a.

be abandoned even in cases where the exposure has been of seve hours' duration, until a very prolonged oxygen and lung-exercise tr ment has been persevered with? Also, ought not medical men mining districts to coach themselves better in the treatment of t cases than is the custom with the majority?

APPLIANCES.

There are several appliances suitable for carrying out the rec mendations in the rules that follow, and it is necessary that th should be familiarised in the minds of those to whom this ar appeals. They could not fittingly be described in the rules the selves without making the latter unduly long, and so largely defeat their object, namely, that of "memory quickeners" in emergenc Moreover, in the event of an accident, little good can be done if th ar d then only, the study of the life saving appliances is to be commenc For these reasons the description of them has been kept separate, an only intended as a general guide in the selection of a life-saving ou Minute details have also been avoided, as these will naturally supplied with the appliancs, and must be mastered by those who to have access to them, it being suggested that half-a-dozen men sho be thoroughly instructed and drilled as an Oxygen Brigade, as adjunct of the customary works' ambulance or fire brigade. If this done, the manager will, when necessary, have able adjutants at service, and the wisdom of purposely omitting such particulars fr the rules will be evident, since if they are not there the men can depend upon them for reference, but must thoroughly master t mechanical details of oxygen administration. In the first place, the fore, we will deal with

THE OXYGEN BOTTLE

itself, and the administration of the gas. This can be done briefly, the rules cover much of the ground. It is highly desirable that t oxygen should be as pure as possible, and as that prepared by Ber process has stood the test of practical and medical use, preference given to it Also, the Manchester Oxygen Company, and reli branch companies who make it, have specially provided a cylinder convenient size, charged with gas, and fitted with a regulating va capable of fine adjustment. Fig 1 shows such a cylinder, with stand and valve complete. In Fig. 2 the details of the valve fitti are shown. A comparison of the letterings will explain the illustrati at once, **N** being the oxygen outlet The lettering also refers printed instructions which are supplied by the Company, explaining t method of connecting the fittings. Minor details of the connecti may vary a little when supplied by the branch companies, but t

l design is the same. The key K is turned once or twice, and pply regulated by the valve handle T.
dministering the oxygen from cylinders in which it is so highly essed the perfect control of the

PRESSURE IS OF GREAT IMPORTANCE,

is absolutely necessary to have a proper regulating valve in on to the usual screw K. In the hands of those who have had ence in dealing with gassing cases, the regulation of the pressure easy matter. It is most simply effected by manipulating the ting valve R, shown in Figs. 1 and 2. The pressure reducing shown in Fig. 2A is, however, preferable in some respects. It is usted as to deliver the whole contents of a cylinder at a steady, n, and convenient pressure. Its action is automatic, so that no how much the cylinder valve is opened by the key K, the re will always remain safe and constant, while the flow of n be regulated or completely checked by compressing the ubber tube between the fingers. There will be no accumu- of pressure to bulge the tube or burst it off the nipple. and 4 show the usual means by which the gas is administered. bber tube and glass or vulcanite mouthpiece can be rigged up in oratory, and personally, preference is given to it. The choice of falls on the face piece or mask, which is provided with a atic cushion, the oxygen supply tube being slipped over the apex cone; but the selection may safely be left to those who are ed to use them. Before closing this section, which deals xygen as the principal and best *general* rescuscitant, reference e made to the

CHLORINE MIXTURE

is prepared by Mr. Towers, of Widnes. It has a pleasant taste, intended specially for the treatment of chlorine gassing, in which ty it has been advantageously used for some time by the United Co., Ltd., on their chlorine plants.

RESPIRATORS AND RESCUING APPLIANCES.

se are many. Several forms, like Zimmer's, are well known, having efore the public for years. Others of more recent date, such as vised by Mr. Kingzett, are only suited for hospital, or other similar and can scarcely be included in an article dealing with manu- ng industries. Under this heading, however, it is advisable to ot only respirators founded on an absorbing or filtering principle, o masks, etc., which can be supplied with air or oxygen, and ended for rescue rather than preventive work. The head- f Kleemann is one example. As most of these appliances are of atively long standing and have already been sufficiently des- it is not intended to make more than passing mention, and to special attention to two particular forms which have been devised ecently, and will probably be new to most readers. The one will be dealt with first is

A RESPIRATOR OF THE ABSORPTION TYPE.

lly such respirators are only applicable in cases where gases which dily absorbed have to be dealt with. Fig 6 shows two forms of w respirator just referred to. It will absorb *hydrogen sulphide*, *dioxide* and *chlorine*. Air mixed with hydrogen sulphide in portion up to 20 per cent. and aspirated at the rate of 30 cubic r hour will not contain 0·01 per cent. of H_2S after passing h the respirator, 0·1 being the minimum poisonous per- e. The same result is obtained with mixtures of hydrogen le and carbon dioxide. The absorption continues perfect ractically the whole of the absorbent has been saturated. Fig. ws the construction of the respirator diagrammatically. ill be seen, it consists of a container C, filled with ial solid absorbent and connected by a flexible tube T to form of mouthpiece, fitted with automatic inlet and outlet The air enters by the opening O, and passing downward h the absorbent contained in C, is filtered through cotton wool ebonite chamber F, and conveyed thence to the mouthpiece M. haled air escapes through the exit valve E. A noseclip N for evention of accidental inhalation through the nose, is attached to uthpiece by a small chain. The plug P closes the inlet O when pirator is not in use, and at the same time serves as a convenient t for the mouthpiece. It is made in two sizes for the respective es stated in the illustration. The "Rescue" form is about the an ordinary field glass, and, fitting into a leather case, is carried elt round the waist or by a shoulder strap. It will keep a man air containing ten times the minimum poisonous quantity of en sulphide for six hours, or in gas of one hundred times the ous strength for forty minutes. The "Pocket" form is half the d has half the efficiency of the "Rescue" respirator. It can be in the breast pocket, as the gross weight is 14 ounces when d. Fig. 7 shows the larger respirator fitted for use, the safety eing attached to the belt which carries the absorbing chamber. sorbent does not become *wet* in use.

Though it is very efficacious for absorbing certain acid gases, it must *not be used* for carbon monoxide or nitrous fumes.

RESPIRATORS OF THE RESCUE TYPE.

Under this heading, apparatus suitable for use under *all* circumstances will be considered. As will have been seen, there are cases where the usual respirator cannot be depended on. In sudden evolutions of gases in confined spaces and such like unforeseen mishaps, there is no time to even mentally estimate the probable percentage of poisonous gases present, to say nothing of the numerous instances where the atmosphere is known to be absolutely irrespirable. Further, in rescuing after colliery explosions and similar disasters where the rescuers have to work for a long time in very bad atmospheres, it is necessary to place beyond doubt the reliability of the protection afforded the workers.

Under such circumstances nothing is better than a facepiece, fitted with inlet and outlet valves, which can be supplied with air or fortified air, *i.e.*, a mixture of air and oxygen The *mouth*piece used on Towers' respirator is applicable for emergencies. It must, however, always be remembered that, owing to the difference between the sensitiveness of the mucous membrane of the nose and mouth, it is possible, when the nose is closed, to inhale a dangerous quantity of gas without knowing it, so that for most purposes it is desirable that while the nose and mouth are completely covered, they should be left free, so that it is possible to breathe through them both. Violent exertion also is often undergone, and if the nose is closed there is a sensation of shortness of breath, which is distressing even if it is largely imaginary and the impression it creates delusive.

Fig. 8 depicts a man wearing the Towers' Rescue Pipe and mouthpiece, and a safety cord, the invariable use of which is recommended in the rules. The apparatus packs away into a small box or case, the lid of which is constructed so as to be opened in a moment by a turn of a single thumbscrew. After a trial extending over some months this particular form of rescue pipe has been adopted for use in all the works of the United Alkali Company, Limited. The *face* piece previously referred to will now be explained. It has been devised by Mr. Douglas Herman, and has been put through a number of tests and trials, in addition to which the following remarks are based on a direct acquaintance with the contrivance and personal experience of its convenience. Its main advantage is that it is virtually applicable to *all* classes of work under the most trying and dangerous circumstances. Fig. 9 shows the general appearance. The edge of the cone-shaped body is protected by a pneumatic cushion, readily inflated by the mouth, and closed with a small plug of glass rod at *a*. By means of a buckle and elastic band passing round the head, the whole is held firmly in position on the face, to the contour of which the pneumatic cushion fits closely and easily. The supply of air enters through *b*, and the exhaled products escape by the valve *c*. This valve is very simple and ingenious. A metal "pill box," perforated at the lower edge and the bottom, is closed by an ordinary cork, with a hole in the centre, to fit over a short pipe projecting from the body of the mask. Prior to closing the mouth of the "pill box," a disc of mica is inserted. When in position, as shown in the cut, this combination acts like a clack or grid valve, the mica disc rising with pressure from within, but sitting air-tight on the smooth surface of the cork under the external pressure exerted during the inhalation of air through *b*. With this face piece a man has worked for 20 minutes in a hot flue, full of Producer Gas, with safety, and, considering the surroundings, without inconvenience.

The end of these introductory explanations of details has now been reached, and we can proceed to the code of rules themselves which constitute the pith of this article, as they represent the outcome of the inquiries and investigations that have now been prosecuted for nearly 12 months. It must be borne in mind that their primary object is to provide for the prompt and adequate use of oxygen gas as a restorative. At the same time acknowledgment is here made, and thanks rendered to both firms and individual friends, for the help they have so freely extended in the compilation of these rules. The two main features of the scheme on which the rules are based are the treatment of those gassed and the classification of the gases. The classification is further sub-divided with a dual object. In the *first* place, the peculiarities, and the special precautions to be observed, are stated under the headings of the respective gases, so that in an accident, reference can be at once made to any gas. *Secondly*. The occurrence is given. This is put last, as it is only of service in preventive work when it is desirous to know what gases the workmen may be expected to encounter. In spite of all the care that has been expended, and the co-operation and criticism that have been invited and exercised, it is scarcely to be hoped that a perfectly comprehensive and faultless code has been devised. Without being presumptuous, however, it is hoped that the code will prove itself the worthy nucleus of such an extended knowledge and use of oxygen and rescuing appliances that, in future, gassing *fatalities* shall be as scarce as sea serpents, although the number of *accidents* be doubled in numbers yearly.

RULES FOR DEALING WITH DANGEROUS GASES.

GENERAL REGULATIONS.

NO person must enter any boiler or tank which has been recently used for the storage of any poisonous liquid or gas or enter any dangerous workings, drain, sewer, culvert, gas purifier, flue, vitriol chamber, or tower (whether closed or open), except under the following conditions:—

1. A respirator properly charged and in good condition *must* be worn. If the atmosphere is wholly irrespirable, a safety pipe and face-piece supplied with air or oxygen must be substituted, according to the manager's instructions
2. The person entering must be efficiently secured round the waist by a rope, the opposite end of which must be securely fastened to the ground at the surface, or at the top of the tower or flue, &c.
3. A man must be in attendance and ready to render assistance if necessary. For underground work and in difficult positions *two* men must always be on the surface ready to assist.

HOW TO TREAT WHEN GASSED.

Remove as speedily as possible into the open-air, and place in a well ventilated position near the boiler, so as to keep as warm as possible

IN BAD CASES use the oxygen bottle and lung exercise simultaneously from the outset.

USE OF OXYGEN BOTTLE.

THE BOTTLE MUST NEVER BE USED WITHOUT A REDUCING VALVE.

If Conscious.—Very slightly turn on the valve so that the oxygen flows in a gentle stream Place the glass tube in the mouth and let the oxygen be breathed until relief is obtained.

If Unconscious.—Place the oxygen delivery tube in one corner of the mouth, closing the lips round it. Keep the oxygen flowing in a gentle continuous stream, alternately closing and opening the nostrils to inflate and deflate the lungs. (Gently pressing the chest when the nostrils are open assists the deflation.) **If the Teeth are Set.**—Close the lips. Insert the oxygen tube in one nostril and alternately close and open the other in the manner just described. The complete inflation of the lungs is indicated by the blowing out of the cheeks. The closing of the lips is therefore important. *Carefully avoid too great a pressure in the lungs.*

LUNG EXERCISE.

This is not often necessary, but if the oxygen does not act within a reasonable time, use the following additional help to respiration:—Lay the body at full length, face upwards, slightly raising the *shoulders* with a folded coat, the head falling well back. Loosen the clothing round the neck and chest. Grasp the arms above the wrist and steadily draw them straight out above the head, holding them there for two seconds. Then turn the arms down, bending the elbows, and at the same time pressing them firmly against the sides of the chest, and hold them in that position for two seconds.

Continue this treatment about 15 times a minute for twenty minutes without cessation, or until consciousness is restored.

DANGEROUS GASES: NATURE AND OCCURRENCE.

The following are the chief gases met with in chemical and gas-works, &c. Allowing for the frequency of their occurrence, they are roughly arranged in order of danger:—

Nitrous and Nitric Acid Fumes.—*Very* insidious in their action. Can be inhaled at first without great inconvenience, but sooner or later (sometimes after the lapse of several hours) they react acutely, producing symptoms that need very prompt treatment. When there is any suspicion of gassing, remedial measures should always be adopted, whether there is any distress or not, and careful watching is advisable during the ensuing twelve hours. OCCURRENCE.—They are met with in Gay-Lussac towers and vitriol chambers during repacking or cleaning. In the manufacture of nitrate of iron and nitric acid, and all breakages of vessels containing this acid. In the case of *Gay-Lussac towers*, the bottom or the top of the tower should be temporarily connected to the flue, to create and maintain a steady draught *away* from those engaged in unpacking. *Vitriol chambers* should be worked weak for some time, and well steamed and ventilated before opening, but no exact rules can be laid down.

Sulphuretted Hydrogen and Chlorine.—*Sulphuretted hydrogen* is one of the most dangerous gases, insensibility resulting very suddenly with even small quantities. Oxygen is the best restorative (see "Use of Oxygen Bottle"). OCCURRENCE.—In gas liquor-storage wells, gas purifiers, sulphate stills and saturators, sewers (in conjunction with carbon dioxide) In the case of an unexpected, copious outburst the *Absorbing Respirator* acts well and the "Pocket" form is very convenient. *Chlorine.*—The instantaneous and continued use of all pos remedies is recommended. *Owing to its smell and colour, bad can only be due to gross carelessness.* The "Gas Mixture" sh always be administered at once, and can be followed with am whiffs, whiskey, or hot tea, with a view to inducing free perspira OCCURRENCE.—About bleaching powder chambers, manganese Deacon and other chlorine plant.

Carbonic Oxide and Carbon Dioxide (Afterdamp, and bonic Acid or Choke Damp).—*Carbonic oxide* is the more danger being a direct poison. OCCURRENCE.—Colliery workings after ex sions, gas producers, blast furnace gases, and the manufacture of cal carbide present the greatest danger. *Carbon dioxide* suffocates rather poisons. In cases of gassing with this and carbonic oxide longer treat is necessary, as the lungs have to be cleared by displacement. Th of oxygen may be supplemented by the lung exercise usually res to in drowning cases and described at the end of "Use of the Ox Bottle" OCCURRENCE.—The same as for sulphuretted hydr with the addition of the fermentation rooms in breweries, coal-pits workings, disused wells, &c

Hydrocyanic Acid Gas and Arseniuretted Hydrog Hydrochloric Acid Gas and Sulphur Dioxide.—*The firs* are generally met with only in the manufacture of cyanides and chemicals, or experimental work. Special care must be exer where their formation and escape is possible, and oxygen always handy. *Hydrochloric acid gas and sulphur dioxide.*—Virtuall accidents have been recorded with these gases. Like chlorine, are so irritating that a leak is detected directly. OCCURREN *Hydrochloric acid:* Near salt-cake pots and about condensing to *Sulphur dioxide:* Near pyrites kilns, certain refrigerating plan copper working and the roasting of ores.

The Patent List.

This list is compiled from Official sources in the Manch Technical Laboratory, under the immediate supervision George E. Davis and Alfred R. Davis, who report professio upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Refining Cotton and other Seed and Vegetable Oils. J. W. Hope October 5.

Improvements in Tanning. J. Forster. 22,103. October 6.

Improvements in Bunsen Burners. S. Mason. 22,122. October 6.

Manufacture of Calcium Carbide Electrothermally. H. Maxim. October 6.

Substitutes for Natural Musk. M. Dinesman. 22,139. October 6.

Blasting Compounds. J. C. C. Hamilton. 22,162. October 6.

Explosives. G. Kynoch and Co., Ltd., and A. T. Cocking. 22,190. Octo

Improved Manufacture of Paint, etc. J. Jones. 22,344. October 8.

Manufacture of Lactic Acid. J. Y. Johnson. 22,351. October 8.

Construction of Filter Presses. F. A. Roche. 22,385. October 9.

Improved Soap. J. Symonds. 22,390. October 9.

Apparatus for Purifying Oils and Fats. A. G. Petty. 22,424. Octobe

Improvements in Tanks and Filters for Sewage, etc. H. L. Bi 22,503. October 10.

Method and Apparatus for Concentrating Sulphuric Acid. M. Sch 22,512. October 10.

Solvents for Nitrocellulose. A. W. Strehlenert. 22,540. October 10.

Manufacture of Gas and Recovery of Bye-products. J. H. D 22,549. October 10.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Jour and ALL RIGHTS *of publication are* RESERVED. *This is the onl series of abstracts of Chemical and allied patents accessible to public.*

Improvements in the Manufacture of Cyanides and Ferrocyanides Sulphocyanides, and in the Recovery of Bye-products. J. Ra and J. Brock, both of Git, Exchange-buildings, Liverpool. Eng. P.A. 1 November 14, 1895.

This is an improvement upon patents 10,476 and 10,956 of (*vide C.T.J.* 474, p. 399). Nitric acid is still the oxidant but the after treatment differs. A solution of the sulphocyanid run into a closed vessel containing some water heated to about 9 Nitric acid or a mixture of sulphuric acid and a nitrate is simultaneo run in, and the contents agitated. There should always be an ex of free nitric acid. Air is carefully excluded to prevent the oxida of the nitric oxide. The gases evolved (HCN, CO_2, H_2O, and nitr fumes) are scrubbed with water at 80°C., whereby the nitrous compo are removed. The HCN is next removed with cold water, allow the CO_2 and nitrous fumes to pass on. These are passed through li water when traces of HCN are fixed as soluble cyanide of calcium, chalk precipitated. The escaping nitrous fumes are treated with air steam to recover the nitric acid. By treating with an alkali

um cyanide is decomposed, and the solution of HCN converted in ame way, or the ferrocyanide obtained by means of iron salts. apparatus must be worked under a vacuum to avoid leakage of the N.

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rovements in the Production of Nitrogen Compounds and in apparatus employed therein. T. L. Willson, 19, West Thirty-eight treet, New York, U.S.A. Eng. Pat. 21,755. November 15, 1895. (Under nternational Convention, April 15, 1895.)

etallic nitrides are prepared in much the same way as calcium de. A mixture of magnesium oxide and carbon is heated in an ric furnace, and nitrogen gas passed through the mass, producing nesium nitride and carbon monoxide. As is generally known, this de decomposes in the presence of moisture into free ammonia and nesium hydroxide. Air is used as the source of nitrogen by ng it over incandescent coke to fix the oxygen. In the case of nesium the presence of CO_2 and CO is objectionable; perfect ustion is therefore obtained, and the CO_2 removed by passing gh lime-water. The furnace is of the usual crucible shape, with ncil electrode passing through the lid, while the tuyere by which itrogen is introduced, being of carbon, acts as the other. There ur figures showing different ways of constructing the furnaces, and completed de-oxygenating plant and electric furnace. By using m oxide and carbon, so as to first form calcium carbide, it is ed out that on passing the nitrogen calcium cyanide should be ed. In practice, however, no appreciable yield has so far been ned.

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ovements in the Manufacture or Production of Alkaline Silicates, r Silicates of the Alkaline Earths, and of Chlorine or Hydrochloric cid. D. A. Péniakoff, Rue Baudin Pièrre, Huy, Belgium. Eng. Pat. 2,037. November 19, 1895.

licate of soda is produced by heating to a high temperature, and f contact with the air, a mixture of silica, sodium sulphide and ate. The materials must be in an anhydrous state. For the ide, carbon or pyrites may be substituted. The reaction is then llows:—

$$5SiO_2+5Na_2SO_4+FeS_2=5Na_2SiO_3+FeO+7SO_2.$$

sulphur dioxide evolved is collected, and may be utilised for erting alkaline chlorides into sulphates with the liberation of ine or hydrochloric acid The production of chlorine is greatly ed by employing the well-known oxygen yielding compounds ad of atmospheric air.

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ovements in the Manufacture or Production Alkaline Aluminates, r Aluminates of the Alkaline Earths, and of Sulphurous Acid. . A Péniakoff, Rue Baudin Pièrre, Huy, Belgium. Eng. Pat. 22,038. November 19, 1895

ne aluminous ores used must be as free from silica as possible. ray of example, bauxite may be instanced It is calcined at a high erature, without the admission of air, with sulphate of soda and on. On the industrial scale it is necessary to use equivalents of ina and sodium sulphate, while only one-fourth the amount of on required to convert the sulphate into sulphide is taken. The ion with bauxite is:—

$$Al_2O_3+Fe_2O_3)+8Na_2SO_4+5C=16AlNaO_2+8SO_2+4FeO+5CO_2.$$

aluminate is finally extracted by lixiviation and the sulphur ide collected.

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rovements in the Manufacture or Production of Aluminates and Sulphurous Acid. D. A. Péniakoff, Rue Baudin Pièrre, Huy, Belgium Eng. Pat. 22,039 November 19, 1895.

the course of the familiar reaction between alumina, sulphate of , and pyrites at high temperatures, by reason of the dissociation of -sulphides, etc., much sulphur is lost without acting on the ate. If, however, ferruginous ores of alumina be used, the ciated sulphur combines with the ferric oxide to form mono- ide of iron, and finally is given off as sulphur dioxide, leaving us oxide. No free sulphur is allowed to exist save in a nascent , and all of it is eventually obtained in a useful form. Red ite is cited as an example, but the reactions are involved and telligible unless the whole of the five equations are given.

Improved Method or Process for Use in Obtaining Hydrogen Gas from Water, and Means for Obtaining by such Method or Process Carburetted Hydrogen and other Combinations of Hydrogen, and Apparatus for use in such Method or Process. J. Green, Montford House, Waterloo-road South, Wolverhampton. Eng. Pat. 13,510. July 13, 1895.

team and a hydrocarbon compound are burnt in a suitable chamber nected to a gasholder to receive the resulting carburetted hydrogen. Instead of a vapourised hydrocarbon carbon monoxide may be employed. Hydrogen gas itself is, according to the patentees own words, obtained by burning steam with hydrogen The steam and gaseous compound are passed through a long coil, so that both are superheated before being burnt. There are four figures showing the construction of a suitable apparatus.

Improvements in Process and Apparatus to be Used in the Manufacture of Soap. W. F. Haywood, Austin, Illinois, U.S.A. Eng Pat. 16,746. July 28, 1896.

A horizontal steam-jacketted cylinder is used as a saponifying vessel. L-shaped arms are fixed crosswise, while an equal number of similar arms are rotated by a central shaft. Owing to the position in which the arms are fixed, and their shape, a thorough mixing is obtained, the motion of the contents not only being rotary but oscillatory. In using the apparatus steam at about 40 to 60 lbs. per square inch is admitted to the jacket, and agitation commenced. The mixture of fluid oil or fat and alkali soon reaches the same temperature as the steam. A valve is then opened and the air blown off, the steam from the lye taking its place. After closing the valve the temperature rises to over 500° F., at which the glycerine and alkali combine, and in a few minutes saponification is complete, and the contents duly discharged into the crutcher. At this point any clippings can be incorporated, thus helping the soap to assume the desired consistency for framing. It is claimed that by this treatment all the charge combines, there being no separation of spent lye, "nigers," or free glycerine, while the whole operation of saponification becomes a matter of minutes instead of hours.

Improvements in Aluminium Compounds and Means for Producing the same. R. I. Roman, 31, Lombard-street, London, E.C. Eng. Pat. 17,250. September 16, 1895.

The object is to prepare a carbide of aluminium or aluminium alloy, which compound shall bear the same relation to pure aluminium as carbide of iron (steel) bears to iron. To this end about 1 per cent. of calcium carbide enclosed in a cartridge of aluminium foil is dropped into a bath of molten aluminium. There is a great rise in temperature, after the subsidence, of which the reaction is complete. About 16 parts of an alloy of 3⅓% nickel and wolfram, and 93⅓% aluminium is then added to every 84 parts of aluminum carbide. When the whole is thoroughly molten, the alloy is poured off, leaving at the bottom the calcium, silicon, iron, wolfram, and other impurities as a slack. The resulting alloy may contain from 0·1% up to 1·5% of carbon, and possesses great elasticity and considerable hardness.

Reports of Companies.

BRITISH BROKEN HILL PROPRIETARY CO., LTD.

The report of the directors of this Company for the half-year ended June 30 states that the report of Mr. Retallick, the company's manager at Broken Hill, mentions the starting on June 17th of the new concentrating plant erected by the company on Hancock's system. Comparatively little exploratory work was necessary during the half-year, and the attention of the manager was chiefly directed towards preparations for a large output of ore for the supply of the concentrating works. Nothing has occurred to diminish the confidence of the directors that large and continuous supplies of payable ore will be obtained, and the manager's report appears to them in this respect very satisfactory. Recent colonial advices report that close to the boundary of Block 16, at the 570 ft. level, very rich bodies of sulphide ore are being stoped by the Junction North Company. The official assays of the ore are 50 oz. silver, 46 per cent. lead, and 18 per cent. zinc. There can be little doubt that this body of ore will be found in the Broken Hill property. There is a credit balance for the half-year on the profit and loss account, after paying all outgoings, making with the previous credit balance a total of £1,222. in favour of the company, subject to depreciation on plant account. This result is largely due to the advantageous investments made of the capital for the time being unemployed. On the termination of the holding by the Broken Hill Proprietary Company, Limited, of the furnaces, the colonial directors sent in a claim for dilapidations, which, after inquiry, was agreed at the sum of £425. This sum was duly paid to the company. The accounts show items amounting to £1,311., fairly chargeable to development account; but this has all been debited direct to the working expenses of the half-year. The directors have decided that it will be unnecessary to summon a half-yearly meeting merely for the purpose of discussing the present report and accounts, which they consider may conveniently be held over until the general meeting intended to be held next spring, when they may be submitted to the shareholders, together with the report and accounts for the current half-year ending December 31st. It only remains for the directors to state, for the information of the shareholders, what appear to them to be the most

important features of the current half-year's work to the present date. The underground workings and prospects continue to be satisfactory. The directors regret that the Burnham Syndicate have not as yet seen their way to obtain the capital for the company it was proposed to form, and they have consequently been called upon to pay to this company the sum of £250., stipulated to be paid in case of their failing to float the Sulphide Company and procure adoption by it of the agreement mentioned by the chairman of this company at the June general meeting. The company's furnaces are consequently unlet. The directors, notwithstanding their great disappointment at this result, nevertheless consider that the company is making good progress, and have every expectation that the working of the current year will allow of a dividend being declared. It is not proposed to issue further capital, there remaining an ample margin of working capital for carrying on business after paying the entire cost of the concentrating plant and all other improvements and additions.

GLENBOIG UNION FIRE CLAY CO, LTD.

The report of the directors of this company for the year ending 31st August states :—The sum at the credit of profit and loss account (including balance of £2,242. 1s 11d brought forward from last year) is £17,439. 11s. 6d., from which there has been written off for depreciation £5,000., leaving a net profit of £12,439. 11s 6d. From this sum it is proposed to pay a dividend of 7½ per cent. (less income tax), payable on 10th November next. This dividend would amount to £10,125., and would leave a balance of £2,314. 11s 6d to be carried forward to the current year. During the past year the works have been constantly employed, no strikes having taken place to interfere with the operations. The manufactures of the company maintain their high reputation. The demand, both at home and abroad, for Glenboig bricks, indicates that, for the furnaces of iron and steel works and other industries where the highest heat is required, they are ever increasing in favour. An extension of the clayfield at Glenboig and also at Gartcosh has been effected during the past year. The resources of the company, as regards the raw material, are practically inexhaustible. The directors are pleased to be able to recommend a dividend of 7½ per cent., and at the same time to write off a large sum for depreciation. The capital expenditure for the year amounts to £4,142. 5s 10d., which includes the purchase of the pit and grinding plant at Gartverrie. Otherwise the works have been kept up in the most efficient condition out of revenue. The directors retiring at this time are Mr. John Wilson and Mr. James Beckett, but they are eligible for re-election. Messrs. J. Wyllie Guild and Scott, chartered accountants, are again proposed as auditors of the company, and the shareholders are now asked to confirm this arrangement for the ensuing year, and to fix their remuneration.

SAN PABLO NITRATE CO., LTD.

The directors, in their report for the year ended June 30th last, state that they regret that the account for the year's working shows that a debit of £3,601., which, deducted from the amount brought forward on July 1st, 1895, of £4,372., leaves a balance of £770 to the credit of profit and loss. Owing to the combination for the limitation of output not becoming effective until March last, and the low prices ruling during the company's current year, the sales of nitrate were unremunerative. The quota allowed to the oficina by the Permanent Nitrate Committee is about 216,500 quintals. This is being made and sold for autumn delivery at a fair profit. All stocks, including iodine, are calculated at cost price only. No profits having been made during the year, the directors have waived their fees.

DIVIDENDS.

NITRATE PRODUCERS' STEAMSHIP.—The directors have declared an interim dividend at the rate of 7½ per cent. per annum, payable on the 31st inst.

WATER AND SEWAGE PURIFICATION COMPANY.—The directors have declared a dividend on the preference shares, at the rate of 7 per cent. per annum, for the half-year ending 30th June.

FIRE AT A SOAP WORKS.—An alarming fire occurred at the soap works of Mr. Robert Brown, Grosvenor-street, Newton Heath, Manchester on Sunday. Notice of the occurence was received at the Oldham-road Fire Station at about seven p.m., and the news was telephoned to the chief fire station in Jackson's Row and the various detachments of the brigade. The firemen were very shortly on the scene, in charge of Mr. Savage, chief officer of the brigade, and it was found that one of a range of timber sheds was in flames. A fireman with a hose cart from Oldham-road, who was first in attendance, was able with assistance to attach two jets to the mains. On the other detachments of the brigade coming up, other streams were connected, *and after about an hour's exertions* the fire was extinguished.

Market Reports.

TAR AND AMMONIA PRODUCTS.

The market as a whole is quiet. Benzols are rather flat at 4½ prompt, for 90's, and 50/90's 3s 3d. Carbolic acids are steady 1s. 9½d. for 60% crude, and 7½d for 40% crystals. Naphtha firm, and in fairly good request—solvent 1s. 6d. and crude 1 Creosote is steady at 1½d. Anthracene quiet. Pitch is only moderate the demand being light; price ranges from 28s. to 31s., f.o.b. Coast.

There is no relief from the prevailing decline in sulphate of ammonia Buyers are not over anxious, and sellers are offering very freely. Best quotation is £7. 5s. London outside makes £7 7s. 6d., Liverpool £7. 3s. 9d, Hull £7 2s 6d, and Leith £6. 17s. 6d. to £7. 1s. 3d. prompt. Beckton is offering for January-June delivery at £7. 8s. to £7. 10s.

REPORT ON MANURE MATERIAL.

There is rather more doing, the attraction being the extreme prices current, but for the most part supplies are quite sufficient to meet any demand. Any improvement is to be attributed to advance in freights. Quotations for mineral phosphates are unchanged, but sellers seem inclined to be rather firmer in their attitude. The market for bones and bone meal is decidedly firmer. There is considerable inquiry for River Plate cargoes of bones, which are very scarce. £3. 15s. per ton would have to be paid for anything of handy size. The quotation for crushed Kurrachee bones and East Indian bones for shipment is £3. 17s. 6d., but £3. 16s. 3d. would probably be business if bid. Nitrate of soda is rather firmer on spot, 8s. being refused for fine quality. There is nothing fresh in miscellaneous materials.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade prices have undergone no change in the week. The shortening in output of alkali in the largest factories will tend to put the market in a better position; alkali, 58%, meets unchanged at £3. 7s. 6d., bags, f.o.r. makers' works, though some business has been done slightly under this for future delivery. For export trade the price is much lower. Caustic soda nominally unchanged, but considerable business has been done for forward at important concessions on present quotations. Spot values may be taken f.o.b. Liverpool at :—77%, £9.; 74%, £8.; 70%, £7. 7s. 60%, £6. 7s. 6d. per ton, 10 ton-lots and upwards. In chloride there is no further decline in quotations, but little or no demand. Potash, 4d per lb.; soda, 5d. per lb. In bleaching powder there is more doing for prompt delivery at £6. 10s. to £6. 12s. 6d per ton f.o.r., and for forward delivery considerable business has been done on the basis of £6 5s. per ton. Saltcake slightly easier for immediate delivery, at 19s f.o.r., and forward at 21s. to 22s. per ton. Recovered sulphur firm, at £4. 12s 6d. to £4. 15s. Bicarbonate steady. Sulphate of copper steady, at £16. f.o.b. Potash, caustic and carbonate, continue in good request, both for prompt and forward delivery. Yellow prussiate of potash, 5⅞d. per lb. Cyanide, 8d. per lb. Brown acetate of lime, £4. 7s. 6d. to £4 10s. f.o.r., £4 c.i.f. Acetate of lead quiet in all qualities. Nitrate, £19. Litharge rather firm, at £14. 10s per ton. White powdered are selling more freely at £21 15s. to £22. per ton. Green copperas active demand. Muriate of ammonia rather easier, both prompt forward. Sulphocyanides quiet, and unchanged in value. Nitrate soda rather firmer, at 7s 10½d to 8s. per cwt.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed 47s. 10½d.; Middlesbrough 39s. 10½d., cash, and hematite Copper, steady: Chili bars, G.O.B.'s and G.M.B's., closed £47. 11s. 3d. to £47. 16s. 3d. cash, and £48 1s. 3d. to £48. 5s. three months. Tin, dearer: Straits closed at £57. 17s. 6d. £58. 7s. 6d. cash, and £58 10s. to £59. three months; Australian £59. 5s. English ingots, £62 to £62. 10s. Lead: Spanish, £ 1s. 3d. to £11. 2s 6d.; English, £11 5s to £11. 7s. 6d.. Silver spelter, ordinary, £16. 10s to £16. 12s. 6d. Nickel, 1s. 2½d. Antimony £29. to £29. 10s. Quicksilver: First hands, £6. 12s. 6d.; second hands, £6. 11s. 6d. *Copper shares*, quiet: Cape, 2⅝ to 2 Copiapo, 2¼ to 2⅜; Libiola, 2 to 2⅛; Mason and Barry, to 3⅛; Rio Tinto, 23/16 to 23/16; Tharsis, 5⅛ to 5⅜.

GLASGOW, WEDNESDAY.—Market strong. A good business in Scotch at 47s. 11d., 48s., and 47s. 10½d. cash, also at 48s. 48s. 2d., and 48s. 1½d. one month; buyers, 47s. 10½d. Cleveland done at 39s. 11d. cash, and 40s. 2d. and 40s. 1½d. month; buyers, 39s. 10½d. cash. Cumberland hematite dull

1d. cash, also at 49s. 4½d., 49s. 5d., and 49s. 4d. one month"; rs, 49s. cash. Middlesbrough hematite done at 47s. 1d. cash, 47s 4d. one month ; buyers, 47s cash ; sellers, 47s. 1d.

TYNE CHEMICAL REPORT.

TUESDAY.

emicals are still quiet, with a limited inquiry, with the exception ablanc alkali, which is in better demand, and price has advanced er ton. Soda crystals, £2. 2s. 6d. per ton, gross weight locally. ıur, £4. 15s. per ton, and scarce. Caustic soda unchanged. eaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. on, nett; recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; ash, 48%, £4. 2s. 6d. per ton, nett ; do., 50%, £4. 5s. per ton, do , 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3 7s 6d per nett ; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. l. per ton, nett ; do., 52%, £5. 7s. 6d. per ton, nett ; hyposulphite ia, 5-7 cwt. casks, £6. 5s. per ton, nett ; do., 1 cwt. kegs, £7. on, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett ; 100° Tw., £3. per ton, nett ; do., 140° Tw. £3 7s. 6d. ton, nett : soda crystals, casks, £2. 2s. 6d. per ton, weight ; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight ; ate of potash, 5d. per lb., less 6% ; pearl hardening, per ton, nett ; pure white sulphate of alumina, £3 17s. 6d. on, nett ; blanc fixe, £7. 5s. per ton, nett : chloride of barium, d crystals, £6 15s. per ton, nett ; do , 90/95% crude calcined, £6. on nett ; sulphide of barium, crystals, £4 15s. per ton, nett ; nate of alumina, £30. per ton, nett : aluminate of soda. £30. on, nett.

LT.—South Durham Salt steady at 9s. per ton, f.o.b Tees.

OALS —Trade is rather slow at present, with the exception of nd household qualities, which are improving in demand. Coke is n good consumption. To-day's quotations are :—Best Northum- steam, 7s. 9d. to 8s. 3d. per ton ; second qualities, 6s. 9d. to d. per ton. Small steam, 3s. 6d. to 3s. 9d per ton. Gas coals, l. to 7s. per ton. Household coals, 10s. to 11s. per ton. Coke y, 14s. to 15s. per ton.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

LS.—Palm oil is steady and sales are fairly good at £23 7s 6d. agos ; hard oils, £19 10s. per ton, all transit. Olive is firm, but usiness passing is rather restricted by the firmness of values. ed is inclined to be firmer, and quotations for Liverpool makes in t casks are now 18s. to 18s. 6d. per cwt. according to quality. nseed is very strong, though the price for Liverpool refined is t 17s. to 17s. 6d. American, 18s. per cwt. Castor oil is steady, ood seconds Calcutta rather firmer at 3½d. First pressure French nues to be offered on spot at 3d. per lb. Tallow is satisfactory, usiness fairly free for arrivals and for shipment. Resin is firm in ades, and the offerings small. The demand keeps fairly steady. s of turpentine are a shade easier at 21s. 9d. to 22s. per cwt. leum firm. Russian refined, 5¾d. to 5⅞d. ; American, 6⅜d. to per gallon.

OLOURS.- Prices are steady, and practically without change, es: Oxfordshire, common, £10., medium, £12., best, £15. yshire, common, 40s.; medium, 50s., best, 60s. ; Welsh, best, seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, J.C., 65s. Umber : 40s. to 45s. White lead, £16. lead unchanged. Venetian red, £6. to £10. Cobalt : Pre- l oxide, 9s. 9d. ; black, 9s.; blue, 6s. Oxide of iron : Common, medium, £10. ; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

e most outstanding feature here is the behaviour of sulphate of onia, which has greatly weakened since the time of last writing, s now certainly easily procurable at £7 2s. 6d., prompt Leith, at lower than that, also, if report is to be believed. Continental es continue to be more and more of a sort calculated greatly to ss the article. The inquiry after it is very languid, and the g amongst the makers is that there is no saying where definite m is to be touched. The general market has not got any worse, y rate, and there is a certain bulk of business passing. Borax and ic acid have been put up £2 , and now stand at former figures. r quotations remain practically as before. Mineral oils and fins present no new feature. The advance in lubricants is held, naphtha at 7½d. is rather more called for, but burning oils and s remain easy.

ief prices current are :—Soda crystals, £2. 2s. 6d., nett, Tyne; ash, 48/52°, £4. to £4. 15s. nett, Tyne ; white alkali, 48/52°, £4. 12s. 6d. to £5. 2s. 6d. nett, Tyne ; alum in lump, £5. to £5. 5s. nett, Glasgow ; caustic soda, white, 74° £8., 70/72° £7. 5s , 60/62° £6. 5s., and cream 60/62° £6., all nett, Liverpool : bleaching powder, £6. 12s. 6d. nett, Tyne ; saltcake, 19s. ; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow ; bicarbonate of soda, 5-cwt casks, £6 7s 6d , and 1-cwt. casks £6. 15s. nett. Liverpool ; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow) ; bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow) ; chlorate of potash, 4¼d. less 5%, any port : nitrate of soda, 7s 10 d. to 8s. ; sulphate of ammonia, £7. to £7. 2s. 6d. prompt, f.o.b., Leith ; salammoniac, first and second white, £37. and £35. nett, any port ; sulphate of copper, £16. to £16. 5s. less 5%, Liverpool ; paraffin scale, hard, 1 15/16d. to 1¾d., and soft. 1½d. to 1 7/8d. per lb. ; paraffin wax, 120° semi-refined, 1 15/16d. to 2⅛d. per lb. ; paraffin spirit (naphtha), 7½d. per gallon ; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower) ; ditto (lubricating) 865° £4. 15s. to £5 , 885° £5. 15s. to £6. 5s., and 890/895° £6. to £6. 15s. Week's imports of sugar at Greenock were 5,750 bags beet unrefined.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The demand is quiet and prices little changed. The principal imports into Hull have been linseed, 623 718 quarters, against 463,145 quarters ; rapeseed, 70 674 quarters, against 106,757 quarters ; cottonseed, 123,925 tons, against 134,429 tons ; olive oil, 15,349 casks, against 10,737 casks ; rape oil, 3 437 casks, against 6,397 casks ; oilcake, 10,166 tons, against 11,508 tons ; tallow, 57,409 cwts , against 11,268 cwts. ; bones, 4 701 tons, against 3 019 tons ; turpentine, 13,403 barrels, against 14,584 barrels ; tar, 16,099 barrels, against 17,560 barrels. Linseed oil has declined about 7s. 6d. per ton, closing steady at 15s 7½d., naked spot ; November December, 15s. 10½d , and January-April, 16s. 3d. ; May August quoted 16s 9d Boiled and refined £1. to £2. per ton extra. Export for the week has been 3,600 cwts Refined cotton oil quiet at 14s. 10½d to 15s , naked spot ; for November-April up to 15s. 4½d was paid, but to-day's value is not over 15s 1½d. ; barrels 30s. and ordinary casks, £1. per ton extra. Export of refined oil for the week has been 4,520 cwts Rape oil continues very scarce and high in price Turpentine, 22s. per cwt. Castor oil firm and unchanged. Olive oil quiet. Cod oils, from £16. to £18. per ton. Green olive soaps (Italian), 60%, £16. per ton c.i.f. Hull Pale Belgian oleines, £17. 15s. ; saponified, £18 15s per ton c.i.f. Hull. Yorkshire grease, £8. per ton

CAKES.—Linseed cakes steady ; 95% pure, £5. 17s 6d. ; oil-cakes, £5 ; Russians, £5. 17s. 6d. ; Americans, £5 12s 6d. Cotton cakes quiet ; best makes, £4.; seconds, £3 15s to £3. 17s. 6d.; November-April, £3 10s to £3 12s. 6d. Rape cakes unchanged.

PAINTS.—Owing, no doubt, to the adverse weather, this trade experiences a slackness of orders. Prices are unchanged for red and white leads. Dry mineral colours, £3. to £8 per ton. Oxide of iron, Venetian red, yellow, olive, black, blue, green, etc , in oil, from £11. per ton. Ready mixed paints, in 1, 2, 4, and 7lb. tins, from £24. Paint remover, 25s to 30s per cwt. Imperial black varnish, £5 10s. per ton in barrels.

New Companies.

Scottish Silicate Brick Co.—CAPITAL £10,000., in shares of £1. each. This company has been formed to acquire and work mines of clay and other minerals for brick-making purposes. The subscribers to the memorandum of association are : -A. Kesson, 70, Wellington-street, Glasgow, engineer ; J. Bell, 109, St. Vincent-street, Glasgow, accountant ; J. F. McGregor, 179, West George-street, Glasgow, accountant ; R. Boyle, 2 Cochrane-street, Glasgow, merchant ; J. P. Jamieson, Baillie Stone, Glasgow, brickbuilder ; G. McLennan, 179, West George-street, Glasgow, accountant ; J. Martin, 58, West Regent-street, Glasgow, writer.

Vanna Lava Sulphur Syndicate, Ltd.—CAPITAL £20,000., in shares of £1. each. This company has been formed to acquire, work, and dispose of sulphur and other ores and minerals in the Island of Vanna Lava, South West Pacific. The subscribers to the memorandum of agreement are :—H. W. Linick, 31, Great St. Helen's, E.C , broker ; J. S. Erskine, 19, Garlick-hill, E.C., merchant ; J. White, 10, Osborne-terrace, S W , accountant ; T. Bradfield, 33, Pelham-road, Wood-green, cashier ; T. J. Worley, 17, Ivanhoe-road, Camberwell, secretary ; A. Rickman, 20, Gladstone-road, West Ham, clerk ; H. C. Tirmin, Palace-road, Surbiton, gentleman.

Simon Carves' Bye-product Coke Oven Construction and Working Co., Ltd.—CAPITAL £100,000., in shares of £1. each (of which 65,000 are preference and 35,000 ordinary). This company has

been formed to enter into contracts with H. Simon, of Manchester, and the Soc. Ann. de Carbonisation, to carry out the object of the title. The subscribers to the memorandum of association are :— A. Pernolet, 87, Rue Lafayette, Paris, ingénieur ; T. Letourneau, 87, Rue Fafayette, Paris, ingénieur ; H. Simon, Mount-street, Manchester, M.I.C E. ; Mrs. E. Simon, Lawnhurst, Didsbury, Manchester ; J. Ingleby, Mount-street, Manchester, M.I.C E. ; W. Schroller, 38, Claypath, Durham, M.I.C.E. ; A. Stanley, 20, Mount-street, Manchester, secretary.

Gazette Notices.

PARTNERSHIP DISSOLVED.

J ENGLAND and C. W. JENKINSON, oil merchants and drysalters, Woolwich, u the style of Joseph Green and Co.

BANKRUPTCY ACTS, 1883 and 1890.

Receiving Order.

JOHNSON, C. E. (trading as Miller and Johnson), Mark-lane, E.C., Rainham Fa Essex, and LEE, Kent, chemical manure manufacturer.

IMPORTS OF CHEMICAL PRODUCTS

THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 10th.

Acetate of Lime—

U. States,	1,811 pks.	H. Wallace & Co

Acetic Acid—

Holland,	38 pks.	Little & Johnston
Belgium,	50	A. & M. Zimmermann
Sweden,	15	Fuerst Brs.
Holland,	128	A. & M. Zimmermann

Alkali—

Canada,	20 cks.	J. Barber & Co.
Germany,	20	Spies Brs. & Co.
Belgium,	190 c.	J. Harrison

Alum—

Germany,	6 cs.	L. & I. D. Jt. Co.
Holland,	50 pks.	Ohlenschlager Brs.

Alumina Sulphate—

Holland,	80 cks.	H. Wallace & Co.

Antimony Ore—

France,	50 t.	J. Bamber
Portugal,	50	"
Zanzibar,	50	H. Grey, jun.

Asbestos—

Germany,	£30	M. D. Co.
France,	10	Girard Frs. & Co.
Italy,	460	J. Barber & Co
Germany,	98	Craven & Co.

Barytes—

Holland,	83 cks.	W. Harrison & Co.
"	22	O'Hara & Hoar
"	57	D. Storer & Sons
Belgium,	42 pks.	J. L. Lyon & Co.
Germany,	13	H. Lambert

Caoutchouc—

Germany,	78 c.	W. M. Smith & Sons
E. Indies,	35	Prop. Bull Wf.
France,	63	H. Johnson & Sons
Germany,	115	Wallace Brs.
"	9	F. Huth & Co.
"	11	Anderson, Weber & Co.
Thursday Is.,	26	McIlwraith & Co.
Germany,	5	Prop. Bull Wf.
"	9	S. Figgis & Co.
Zanzibar,	140	L. & I. D. Jt. Co.
Penang,	210	E. Boustead & Co.
Natal,	50	L. & I. D. Jt. Co.
Mozambiq'e,	12	"

Carbolic Acid—

Germany,	50 pks.	Blagden, Prince & Co.

Castor Oil—

Belgium,	12 bls.	A. Brown & Co.
France,	40 brls.	Lucas & Spencer's Wf., Ld.
Belgium,	56	W. F. Mills

Caustic Potash—

Canada,	58 c.	Charles & Fox

Chemicals *(otherwise undescribed)*

Germany,	£55	F. Boehm
Holland,	5	L. C. & D. Rly.
"	10	W. J. W. Childs
"	16	Carey & Sons
Germany,	176	L. & I. D. Jt. Co.
"	340	H. Lorenz
"	106	A. & M. Zimmermann
Belgium,	18	O. Scholzig
"	45	Leach & Co.
Belgium,	64	Société John Cockerill
France,	18	Hernu, Peron & Co.
Germany,	114	Phillipps & Graves
U. States,	1,005	W. G. Figg
France,	150	Barnett Brs. & Sons
Germany,	406	T. H. Lee
"	23	R. W. Harris
"	£040	H. Lambert

Cream of Tartar—

Spain,	5 cks.	W. C. Bacon & Co.
"	10 brls.	E. & T. Pink
France,	20	W. C. Bacon & Co.
"	1	J. L. Lyon & Co.
"	4	C. Atkins & Nisbet
"	10	5 pks. B. & F. Wf. Co.

Dextrine—

France,	30 bgs.	J. W. Drysdale & Co.

Dyestuffs—

Annatto

France,	25 cks.	R. J. Fullwood & Co.

Argols

Cape,	5 bgs.	J. R. Thompson & Co.
Patras,	43 pks.	N. B. Theoclaris

Cochineal

Canaries,	9 bgs.	Kuhner, Henderson & Co.
"	6	Swanston & Co.
"	5	Sperling & Williams
"	71	Knowles & Foster

Cutch

China,	2 hhs.	Williams, Torry & Co.
Ceylon	54	Cayzer, Irvine & Co.
Singapore,	200	J. Swire & Sons
Rangoon,	10	Leach & Co.

Extracts

Denmark,	2 cks	M. D. Co
"	1	Sorensen & Co.
France,	40	L. J. Levinstein & Sons
Ceylon,	7 cs.	H. A. Litchfield & Co.
U. States,	20 pks.	Fisher, King & Co.
Austria,	100 brls.	A. J. Humphery

Gambier

Singapore,	348 bls.	Union L. Co.
"	256	J. Swire & Sons
"	90 bgs.	Anderson, Weber & Co.
"	475	Beresford & Co.
"	439	G. R. Haller
E. Indies,	1,761 pks.	Adamson, Gilfillan & Co.

Indigo

E. Indies,	56 chts.	L. & I. D. Jt Co
"	33	Eales, Prince & Co.
"	4	J. W. Drysdale & Co.

Logwood

B. Honduras,	436 t.	W. Shelcott
"	99	A. Everingham & Co.
B. Guiana,	20	Colonial Co

Orchella

E. Indies,	2 bls.	L. & I. D. Jt. Co

Saffron

Spain,	1 pk.	J. Knill & Co.

Shumac

Italy,	350 bgs.	W. Shelcott
"	40	Hicks, Nash & Co.
"	2,250	J. Kitchin, Ld.
"	800	Beresford & Co.
"	900	H. Johnson & Sons
"	70	R. Waters
"	150	H. K. Daniels

Tanners' Bark

Natal,	68 t.	A. & W. Nesbitt
"	52	Boutcher, Mortimore & Co.

Farina—

Holland,	50 bgs.	Dunlop Brs & Co.

Glucose—

U. States,	500 pks.	500 c. Vokins & Co.
"	50	292 Williams, Torrey, & Co.
Germany,	10	80 J. Knill & Co.
"	300	300 J. Frank & Co.
U. States,	250	250 Robinson & Co.
"	1,750	1,750 Pearce, Pelly, & Co.
"	502	500 Deering & Robottom
France,	200	200 W. E. Cole
U. States,	1,770	1,370 Fellows, Morton, & Co.
"	300	300 T. M. Duche & Sons
"	250	250 C. S. Lovell
"	1,250	1,250 G. Clark & Sons
"	7,921	7,221 R. G. Hall & Co.

Glue—

Germany,	£9	T. H. Lee
"	100	Herrmann, Keller, & Co.
France	10	Bennett S. S. Co.
Holland,	147	J. Barber & Co.
France,	40	Mory & Co.
"	88	Burnett Brs. & Sons
Germany,	37	L. & I. D. Jt. Co.
"	140	Phillipps & Graves
U. States,	30	Armour & Co.
Denmark,	75	Bailey & Leetham
Belgium,	420	J. Barber & Co.
Italy,	96	Sander & Knott
U. States,	24	Lunham & Moore
Germany,	130	R. G. Hall & Co.
"	75	Bailey & Leetham
Austria,	124	M. D. Co.
"	110	Ihlee & Sankey

Infusorial Earth—

Germany,	£250	A. Haacke & Co.
Melbourne,	200	L. & N.-W. Rly.

Insecticides—

Austria,	20 brls.	City Coml. Wf.

Lamp Black—

U. States,	200 brls.	M. Ashby, Ltd.

Litharge—

Holland,	3 cks.	J. Barber & Co.

Manganese—

Germany,	13 t.	C. Hof & Co.
Spain,	13	Williams, Torrey, & Co.

Manure—

E. Indies,	150 t.	A. Hunter & Co.
Germany,	47	Humphrey & Co.
"	50	Ross & Deering

Metallic Oxide—

Germany,	1 ck.	Brit. Anti-Fouling Compo Co.

Methyl Alcohol—

Belgium,	17 dms.	W. Tucker
Germany,	12	Stein Brs.

Mica—

E. Indies,	£28	2 cs. L. & I. D. Jt. Co.
"	150	W. M. Smith & Sons
Adelaide,	182	"

Minium—

Holland,	8 cks.	Spies Brs. & Co.
"	8	J. Barber & Co.

Molasses—

U. States,	100 cks.	610 c. Bellamy & Co.

Naphthol—

Holland,	4 cks.	Phillipps & Graves

Ochre—

Germany,	8 pks.	Phillipps & Graves
Holland,	38	"

Oxalic Acid—

Holland,	25 pks.	R. W. Greeff & Co.

Phosphate Rock—

Belgium,	134 t.	A. Crow & Sons
France,	135	A. Hunter & Co.
U. States,	2,432	West & Penrose
Belgium,	200	D. de Pass & Co.
"	150	Hine Brs. & Co.

Pitch—

Sweden,	200 brls.	Watts & Co.
France,	57	H. Hill & Sons

Plumbago—

Ceylon,	39 cks.	J. Thredder, Son, & Co.
"	34	R. G. Hall & Co.

Potassium Carbonate—

Germany,	203 c.	Kirkpatrick &
"	400	Perkins & Ha
"	100	Petri
Belgium,	205	"

Potassium Oxymuriate—

Sweden,	62 kgs.	G. Boer &

Potassium Sulphate—

Germany,	508 bgs.	Besaler, Wan &

Pyridine—

Germany,	4 dms.	J. M. Steel &

Rosin—

Germany,	13 brls.	L. & I. D. Jt.

Rosin Oil—

France,	100 brls.	A. Brown &

Saltpetre—

Germany,	21 cks.	J. Hall &
"	173	P. Hecker &
"	11	L. & I. D. Jt.
E. Indies,	293 bgs.	Lucas & Spen
Germany,	20 cks.	Petri

Sodium Hyposulphite—

Germany,	200 c.	Petri

Starch—

Germany,	225 pks.	Seaward
U. States,	260	Beck & Poll
Holland,	60 cs.	Phillipps & Gr
Germany,	530	Howe &
"	60	Phillipps & G
Belgium,	213	F. Claydon &
"	154	T. H.
"	97	J. Barber &
Holland,	360	800 pks. Link Johns
Belgium,	40	Leach &
"	220	E. & T. P
"	80	J. Hard

Stearine—

U. States,	10 cks.	L. & I. D. Jt
Belgium,	75 bgs	C. S. Lo
"	63	Mordaunt
Holland,	204	16 cks. H. Hi
Belgium,	317	H. Hill & S
France,	80	H. Wallwo Tra

Sulphur—

Italy,	83 t.	G. Boer &

Sulphuric Acid—

Holland,	10 pks.	J. O

Talc—

France,	£50	Stobbs, Wilson, &
"	40	Blackwell, Sons, &

Tartaric Acid—

Holland,	2 pks.	B. & F. Wf.
Germany,	2	Dossetter &
Holland,	4	F. C. Davis &

Ultramarine—

Holland	12 cs.	Hasellaer, Hilpe &
Germany,	19 pks.	Steinhoff, Sc &
Holland,	28	Thames S. T. & L.

Varnish—

Canada,	3 pcs.	Lunham & Mo
U. States,	41	Taylor

White Lead—

Germany,	43 cks.	Spies
"	75	D. Storer & S
"	10 cs.	Grosscurth & Lab
Belgium,	20 dms.	Leach &
"	20 pks.	Perkins & Ha
"	20 brls.	J. L. Lyon &
France,	19	J. Watt & S

Wood Pulp—

Sweden	240 pks.	W. G. Taylor &
Belgium,	4,234	E. J. & W. Goldsm
Holland,	76	Henderson, Co &
"	162	Beadle

Norway, 160 Christophersen, Andrews, & Co.
Holland, 540 Phillipps & Graves
Norway, 316 W. G. Taylor & Co
,, 300 W. E. Bott & Co.
Germany, 400 W. Griedlaender
Sweden, 400 Moreton Cox Brs.

Zinc Oxide—
Germany, 50 brls. M. Ashby, Ltd.
Holland, 25 pks. ,,
France, 40 ,,
Holland, 75 cks. J. Matton

LIVERPOOL.

Week ending October 8th.

Acetic Acid —
Copenhagen, 20 dmjhns. Evans, Sons & Co.
Rotterdam, 17 hlns.

Alumina Hydrate—
Antwerp, 7 cks. J. T. Fletcher & Co.

Asbestos—
Genoa, 19 pks.

Barytes—
Hamburg, 6 cks.
Antwerp, 56 bgs.
Rotterdam, 13

Bone Meal—
Rangoon, 194 bgs.

Borax—
Valparaiso, 145 bgs.

Caoutchouc —
Valparaiso, 55 bls. Kleinwort, Sons & Co.
,, 485 Hardy, Nathan & Sons
,, 175 Banco de Chilo
,, 360 A. Gibbs & Sons
,, 30 Hughes Treleaven
Havre, 27 cs. Cunard S. S. Co., Ld.

Castor Oil—
Genoa, 60 cs. Evans, Sons & Co.
Calcutta, 1,025 Ralli Brs.
,, 500 Petrocochino Brs.

Chemicals *(otherwise undescribed)*
Hamburg, 5 cs.

Cottonseed Oil—
New York, 125 brls.

Cream of Tartar—
Oporto, 3 cks.

Dextrine—
Stettin, 50 bgs.

Dyestuffs—
Argols
Oporto, 79 cks.
Cochineal
Gd. Canary, 22 bgs Kennedy & Moon
,, 10 Burrell & Co
,, 10 Sperling & Williams
Cutch
Rangoon, 204 bxs.
Boston, 39
Extracts
New York, 15 bxs. 10 brls. W. Bingham
Hamburg, 60 cs.
Gambier
Singapore, 480 bgs.
Logwood
Belize, 93 t. P. Leckie & Co.
Holbas, 562
Saffron
Barcelona, 1 cs. G. Meyer & Co.
Valencia, 6
Shumac
Bordeaux, 50 bls.
Valonia
Dragomestre, 180 t.
Smyrna, 211 bgs.
Syra, 420 G. T. Scrini
,, 125 N. J. Vurzunaras
,, 1,794
Constantinople, 188
Patras, 880

Farina—
Trieste, 100 bgs.
Hamburg, 500 H. Tyrer & Co.

Glucose—
Hamburg, 5 cks.
New York, 200 brls. T. M. Duche & Sons
Rotterdam, 10 cks.

Glue—
St. Nazaire, 13 cks.
Hamburg, 20 bgs.
Rotterdam, 2 2 cs.

Limestone—
Antwerp, 2 cs. J. T. Fletcher & Co.

Litharge—
Rotterdam, 8 cks.

Manganese Ore—
Poti, 2,237 l. Darwen & Mostyn Iron Co.

Naphtha—
New York, 8,411 brls.

Paint—
Boston, 10 cs. Bahr, Behrend & Ross
Hamburg, 3 cks.

Paraffin Scale—
New York, 1,320 brls. Thompson & Bedford
Baltimore, 100
Philadelphia, 22

Paraffin Wax—
Philadelphia, 350 brls. Anglo-Am Oil Co., Ld.

Plumbago —
Genoa, 10 bgs.

Potassium Carbonate—
Hamburg, 12 cks.

Potassium Chloride —
Hamburg, 806 bgs. H. Tyrer & Co.

Pyrites—
Huelva, 2 006 t. Matheson & Co.

Rosin —
New York, 100 brls.

Salt—
Hamburg, 500 bgs.

Saltpetre—
Hamburg, 4 cks. 40 kgs.
Calcutta, 621 bgs. Ralli Brs.

Soap—
New York, 187 brls.

Soapstone—
Bordeaux, 300 bgs. 2 cs. G. G. Blackwell, Sons & Co.

Starch—
Boston, 398 sks. 1,300 bgs.
Baltimore, 400
Rotterdam, 158 cs.

Stearine—
Antwerp, 38 bgs. J. T. Fletcher & Co.
,, 96

Tallow—
Campana, 607 cks.
New York, 5 brls. Colby & Co.
Boston, 240 620 tcs.
Baltimore, 68 cs. 67 250

Tartar—
Bordeaux, 20 cks.

Treacle—
Bordeaux, 5 cs.
Charente, qty.
Rotterdam, 2 hds.

Varnish—
Boston, 20 bxs. W. H. Heynes & Smith

Waste Salt—
Hamburg, 135 cks

Wood Pulp—
Rotterdam, 282 bls
Drammen, 5,695 H. Tyrer & Co.

Zinc Ashes—
Genoa, 75 bgs.
Antwerp, 1 ck.

Zinc Oxide—
Genoa, 1 ck.
Antwerp. 7 50 brls.
New York, 100
Rotterdam, 25

Zinc White—
Hamburg, 40 cks.

MANCHESTER.

Week ending October 10th.

Acetic Acid—
Rotterdam, 34 blns.

Aniline Salts —
Hamburg, 5 cks.

Barytes —
Rotterdam, 6 cks.

Bone Ash —
Santa Elena, 559 t.

Colours—
Hamburg, 2 cks. 5 cs.
Rotterdam, 7 33 12 bxs. 145 brls.

Creosote Salt—
Hamburg, 2 cks.

Farina—
Stettin, 600 bgs Stott, Coker, & Co.

Glucose —
Hamburg, 70 cks.

Glue—
Rotterdam, 5 brls. 2 cs. 110 bgs.
Hamburg, 60 cks 5
Antwerp, 10 bls. 5 pks.
New York, 10 brls. D. Moseley & Sons
Rouen, 22 cks. 15 33 bgs.

Limestone—
Antwerp, 1 crte

Logwood —
Black River, Ja. 382 t.

Manganese Ore—
Rotterdam. 2 cs

Paraffin Scale—
New York, 150 brls. Anglo-American Oil Co., Ld.

Pitch —
Rotterdam, 5 cks.

Potash —
Rotterdam. 5 cks.

Potassium Carbonate—
Stettin, 40 cks Stott, Coker, & Co

Potassium Chloride—
Hamburg, 27 cks.

Saltpetre—
Hamburg 10 bgs.

Sodium Acetate—
Rouen, 29 cks.

Sodium Nitrate—
Rotterdam, 23 cks.

Starch —
Rotterdam, 85 cs.
Antwerp. 60
New York. 200 sks.

Stearine—
Rotterdam, 13 bls.
Antwerp, 7 bgs.

Tallow—
Rouen, 143 bgs.

Tartar —
Hamburg, 10 cks.

Waste Salt —
Hamburg, 300 bgs. and a qty

Wood Pulp—
Gefle 5,640 bls. Stott, Coker, & Co.
Hamburg, 80 1 cs.

Zinc Oxide—
Antwerp, 15 brls.
Rotterdam, 105

Zinc Sulphate—
Rotterdam, 2 brls.

HULL.

Week ending October 10th.

Acids—
Hamburg, 8 cks. Wilson, Sons, & Co., Ld.

Arsenic—
Hamburg, 35 cks. Wilson, Sons, & Co., Ld.

Barytes—
Bremen, 19 cks.
Antwerp, 33 H. F. Pudsey
Amsterdam, 46 W. & C. L. Ringrose
Rotterdam, 23 Hutchinson & Son
Hamburg, 45 Blundell, Spence, & Co

Bleaching Powder—
Antwerp, 21 brls. Wilson, Sons, & Co., Ld.

Camphor—
Hamburg, 6 pks. Wilson, Sons, & Co., Ld.

Carbon—
Rotterdam, 2 cs. Hutchinson & Son

Chemicals *(otherwise undescribed)*
Stettin, 3 cks. Wilson, Sons, & Co., Ld.
Bremen, 1 Veltmann & Co.
Hamburg, 3 Wilson, Sons, & Co., Ld.
Dunkirk, 10 ,,

Cod Oil—
Hamburg, 22 brls. Wilson, Sons, & Co., Ld.

Colours—
Hamburg, 8 pks. Wilson, Sons, & Co., Ld.
Stettin, 30 cks. ,,
Rotterdam, 10 Hutchinson & Son
1 cs.
Ghent, 8 brls. Wilson, Sons, & Co., Ld.
Antwerp, 4 cks. Bailey & Leetham
Rotterdam. 135 pks. W. & C. L.
98 brls. 1 cs. 20 bxs. Ringrose
Dunkirk, 17 cks. Wilson, Sons, & Co., Ld.
Antwerp, 13 pks. ,,

Cottonseed Oil—
New York, 50 brls. Wilson, Sons, & Co., Ld.
,, 4

Cryolite—
Copenhagen, 40 cks. Wilson, Sons, & Co., Ld,

Dextrine—
Stettin, 160 bgs. Wilson, Sons & Co , Ld.

Dyestuffs—
Alizarine
Rotterdam, 20 brls. W. & C. L.
1 bx. Ringrose
Indigo
Hamburg, 2 cs. Wilson, Sons, & Co., Ld.
Rotterdam, 1 Hutchinson & Son
Madder
Rotterdam, 2 cks. Hutchinson & Son

Farina—
Stettin, 130 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 250 W. & C. L. Ringrose
,, 550 bls. Hutchinson & Son

Glucose—
Stettin, 200 bgs. Wilson, Sons, & Co., Ld.
Rotterdam, 50 Hutchinson & Son
New York, 150 brls.

Glue—
Hamburg, 20 bgs.
Rotterdam, 1 ck. 4 W. & C. L. Ringrose
Antwerp, 10 Bailey & Leetham
Dunkirk, 75 Wilson, Sons, & Co , Ld.

Kaolin—
Rotterdam, 122 bgs. Hutchinson & Son

Limestone—
Antwerp, 1 crte. H. Hare & Co.

Phosphate—
Ghent, 816 bgs.
Antwerp, 400 Wilson, Sons, & Co., Ld.

Pitch—
Amsterdam, 24 cks. W. & C. L. Ringrose

Potash —
Dunkirk, 40 dms. Wilson, Sons. & Co., Ld
Antwerp. 59 8 brls. ,,

Pumice Stone—
Hamburg, 20 cs. Wilson, Sons, & Co., Ld.

Pyrites—
Huelva, 1,515 t. Boston, Farmer, & Co.

Quicksilver—
Hamburg, 3 jars Wilson, Sons, & Co., Ld.

Saltpetre—
Hamburg, 97 bgs.
,, 393 Wilson, Sons, & Co., Ld.
Antwerp, 135 ,,

Soda—
Rotterdam, 10 cs. Hutchinson & Son

Starch—
Ghent, 394 cs. Wilson, Sons, & Co., Ld.
Bremen, 2,552 Veltmann & Co.
Rotterdam, 53 Hutchinson & Son
Antwerp, 150 Wilson, Sons, & Co., Ld.

Tallow—
Dunkirk, 70 cks. Wilson, Sons, & Co., Ld.

Tar—
Uleaborg, 2,250 brls. J. Good & Sons
Hamburg, 100 bgs.

Treacle—
New York, 200 brls. Wilson Sons, & Co., Ld.
,, 100

Ultramarine—
Bremen, 20 cks.
Rotterdam, 8 Hutchinson & Son
Varnish—
New York, 52 pks. Wilson, Sons, & Co., Ld
White Lead—
Amsterdam, 7 cks. W. & C. L. Ringrose
Wood Pulp—
Bergen, 482 pks. Wilson, Sons, & Co. Ld.
Helsingfors, 311 bls. J. Good & Sons
Zinc White—
Rotterdam, 25 cks. Hutchinson & Son

GLASGOW.

Week ending October 15th.

Acetate of Lime—
Philadelphia, 513 bgs.
Acetone—
Hamburg, 1 ck.
Arachide Oil—
Rotterdam, 6 cks. J. Rankine & Son
Asbestos—
Montreal, 250 bgs.
Barium Sulphate—
Antwerp, 1,030 bgs.
Barytes—
Rotterdam, 145 pks.
Castor Oil—
Antwerp, 84 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 cs. J. Rankine & Son
Colours—
Rotterdam, 39 cks. 5 bxs. J. Rankine & Son
Hamburg, 3
Rotterdam, 41 pks.
Dyestuffs—
Alizarine
Rotterdam, 37 pks.
,, 39 brls. 1 bx. J. Rankine & Son
Cutch
Rangoon, 860 bxs. P. Henderson & Co.
Madder
Rotterdam, 3 cks. J. Rankine & Son
Glucose—
Philadelphia, 100 brls.
New York, 150
Glue—
Hamburg, 5 bgs. 6 bskts.
Rouen, 58 cks. 13 bls.
Rotterdam, 1 cs. J. Rankine & Son
Gypsum—
Rouen, 300 bgs. J. Rankine & Son
Painters' Colours—
Antwerp, 6 cks. 1 cs.
Paraffin Wax—
Rangoon, 82 bxs. 480 bgs P. Henderson & Co.
Pitch—
Amsterdam, 12 cks.
Potash—
Rotterdam, 32 cks. J. Rankine & Son
Potassium Nitrate—
Hamburg, 30 kgs.
Potassium Prussiate—
Antwerp, 14 cks.
Sodium Nitrate—
Hamburg, 5 kgs.
Starch—
New York, 800 bxs.
Antwerp, 25 cs.
Stearine—
Amsterdam, 121 bgs.
Tartar—
Bordeaux, 16 cks.
Treacle—
Philadelphia, 500 brls. Waddell & Bryson
,, 6
Ultramarine—
Antwerp, 12 cs.
Rotterdam, 1 ck. J. Rankine & Son
Waste Salt—
Hamburg, 142 t. 273 cks.
White Lead—
Rotterdam, 60 cks. J. Rankine & Son
Wood Pulp—
Hamburg, 101 bls.
Gefle, 4,380 Henderson, Craig, & Co.
Christiania, 525
Zinc Oxide—
Antwerp, 25 cks.
Zinc Sulphate—
Rotterdam, 2 brls. J. Rankine & Son
Zinc White—
Rotterdam, 16 cks. J. Rankine & Son

TYNE.

Week ending October 10th.

Alum Earth—
Hamburg, 86 cks. Tyne S. S. Co.
Antimony Ore—
Antwerp, 1,416 bgs. Tyne S. S. Co.
Barytes—
Rotterdam, 38 cks. Tyne S. S. Co.
Antwerp, 43 ,,
Bleaching Powder—
Christiania, 1 ck.
Colours—
Hamburg, 1 cs. Tyne S. S. Co.
Glue—
Hamburg, 4 cks. Tyne S. S. Co.
Antwerp, 1 ,,
Limestone—
Antwerp, 2 cs. Tyne S. S. Co.
Paint—
Copenhagen, 1 dm.
Phosphate—
Antwerp, 220 t. Langdale's Chemical M. Co.
Salt—
Antwerp, 1,100 t.
Starch—
Rotterdam, 136 cs. Tyne S. S. Co.
Antwerp, 80
White Lead—
Antwerp, 12 brls. Tyne S. S. Co.
Wood Pulp—
Christiania, 200 bls.
Gothenburg, 122 pks.
Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.
Zinc Sulphate—
Gothenburg, 30 bgs 20 cs.

GOOLE.

Week ending October 7th.

Alizarine—
Rotterdam, 7 cks.
Alkali—
Calais, 7 cks.
Alum—
Rotterdam, 50 bgs.
Aniline—
Amsterdam, 560 sks.
Rotterdam, 398 cks. 25 cs.
Barytes—
Antwerp 100 bgs.
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 2 cs.
Dyestuffs *(otherwise undescribed)*
Boulogne, 19 cks. 18 pks.
Potash—
Dunkirk, 12 cks. 10 dms.
Saltpetre—
Hamburg, 15 kgs.
Rotterdam, 100 bgs.
Stearine—
Antwerp, 23 bgs.
Waste Salt—
Hamburg, 964 cks. 390 bgs.

GRIMSBY.

Week ending October 10th.

Acetic Acid—
Rotterdam, 20 blns.
Caoutchouc—
Antwerp, 1 cs.
Hamburg, 6 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 6 cks.
Dyes—
Antwerp, 94 cs. 32 pks.
Hamburg, 87 cks.
Plumbago—
Hamburg, 15 cks.
Waste Salt—
Hamburg, 500 bgs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending October 14th.

Acids—
Auckland, 10 cs. £13
Durban, 3 t. 17 c. 49
Alkali—
Auckland, 4 t. £29
Napier, 18 c. 23
Alum—
Salonica, 10 t. 2 c. £56
Ammonia—
Melbourne, 1 t. 4 c. £21
Ammonia (Liquid)—
Rio de Janeiro, 6 dms. £17
Werdingen, 26 180
Ammonium Carbonate—
Santos, 2 c. £6
Adelaide, 13 17
Ammonium Chloride—
Adelaide, 1 t. 2 c. £23
Salonica, 6 1 243
Melbourne, 5 kgs 9
Mannheim, 5 186
Christiania, 2 12 60
Antwerp, 4 cks. 24
Ammonium Sulphate—
Jersey, 69 t. 3 c. £291
Hamburg, 45 330
Treport, 15 150
Marseilles, 100 775
Bremen, 100 800
Rouen, 25 90
Javea, 6 17 85
Ostend, 35 245
Arsenic—
Hanganni, 10 t. £240
Bleaching Powder—
Rockhampton, 2 t. 1 . £40
Boracic Acid—
Wellington, 1 t. £30
Melbourne, 10 cks. 104
Adelaide, 10 c. 15
Brussels, 11 24
Brisbane, 2 55
Borax—
Wellington, 7 c. £6
Adelaide, 5 6
Dunedin, 9 14
E. London, 6 cs. 26
Rockhampton, 12 10
Rotterdam, 10 18
Carbolic Acid—
Wellington, 5 cs. £47
Boston, 6 pks. 22
Hong Kong, 20 dms. 13
Rotterdam, 47 cks. 203
Hamburg, 89 638
Carbonic Acid Gas—
Adelaide, 2 t. 2 c. £125
Caustic Soda—
Cape Town, 14 c. £15
Brisbane, 20 dms. 50
Adelaide, 12 t. 12 90
Nelson, 6 18 22
Melbourne, 1 10 50
Wellington, 5 6 47
Sydney, 7 9
Natal, 3 12
Napier, 5 7 47
Hanganni, 4 19 48
Chemicals *(otherwise undes.)—*
Rockhampton, 5 cs. £36
Hamburg, 11 t. 400
Perth, 16 kgs. 52
Fremantle, 36 pks. 51
N. Orleans, 8 dms. 3
Dunedin, 75
Hong Kong, 48 81
Philadelphia, 5 c. 94
E. London, 17 17
Sydney, 3 cs. 25
Brisbane, 54 pks. 26
Christiania, 1 1 54
Natal, 4 10
Auckland, 15 kgs. 85
Boston, 2 cds. 28
Dunkirk, 20 10 dms 270
Rotterdam, 35 100
Boulogne, 5 15
Yokohama, 3 t. 5 c. 102
Calcutta, 13 56
Bombay, 4 11
Wellington, 16 pks. 62
St. John, 3 17
Mauritius, 4 kgs. 11
Flushing, 1 12
Citric Acid—
Bombay, 4 c. £15
Brisbane, 1 kg. 6
Auckland, 1 8
Hamburg, 12 78
Genoa, 3 t. 5 409
Libau, 1 8
Calcutta, 2 cs. 10
Bermuda, 1 8
Adelaide, 3 20
Natal, 2 14
Brussels, 5 31
Perth, 5 31
Dunedin, 1 ck. 7
Moscow, 2 10 313
Coal Products—
Alizarine
Bombay, 241 cks. £760
St. Petersburg, 12 cs. 635
Aniline Dyes
Calcutta, 2 cs. £73
Anthracene
Rotterdam, 62 cks. £171
Benzol
Amsterdam, 94 cks. £[illegible]
Rotterdam, 122 25 brls.
59 puns. 1,763
Hamburg, 47 [illegible]
Creosote
Dieppe, 23,500 galls. £[illegible]
Creosote Oil
Gothenburg, 230 brls. £[illegible]
N. Orleans, 1,993 cks. 1,[illegible]
Creosote Salts
Philadelphia, 470 bgs. £[illegible]
Cologne, 880 [illegible]
Naphtha
Sydney, 7 cs. £[illegible]
Christchurch, 6 7
Pitch
New York, 1,300 cks. £[illegible]
Rochfeld, 539 t. 1,[illegible]
Boston, 500 [illegible]
St. Petersburg, 7 brls. 3
Amsterdam, 2 [illegible]
Melbourne, 1 cs. 10 3
St. John, N.B., 960 [illegible]
Pyridine
Hamburg, 5 cs. £[illegible]
Tar
St. Petersburg, 230 brls. £[illegible]
Hamburg, 330 [illegible]
Natal, 12 cks. 300 dms. [illegible]
Hong Kong, 20 1
Copper Sulphate—
St. Petersburg, 5 t. 3 c. £[illegible]
Salonica, 2 [illegible]
Copperas—
Cologne, 8 c. £[illegible]
Corrosive Sublimate—
Salonica, 1 c. £[illegible]

n of Tartar—
art, 5 kgs. 3 cs. £39
aide, 10 c. 44
), 5 22
iceston, 5 10
elton, 5 23
ington, 1 t. 13 174
d, 4 21

ogen Bromide—
antle, 11 c. £170
e, 2 cs. 34

fectants—
ourne, 12 cs. £31
a Bay, 272 pks. 207
Town, 1,020 245
adoes 2 cks. 15
antle, 6 54 19

ic Acid—
aide, 7 c. £25

o—
erara, 80 t. £800

esium Carbonate—
os, 2 c. £4

ire—
Town, 100 t. £400
ga, 59 5 c. 420
deloupe, 110 pks. 165
y, 290 946
d, 50 720
ort, 20 130

c Acid—
y, 20 carboys £40

us Oxide—
ourne, 2 cs. £32
edin, 1 29

c Acid—
bourne, 7 c. £11

phate—
g Kong, 2 cs. £26

phoric Acid—
erara, 10 t. £138

ssium Bicarbonate—
adelphia, 2 t. 1 c. £54
khampton, 5 7

ssium Bichromate—
de Janeiro, 8 c. £18
kirk, 5 cks. 70

ssium Chlorate—
os, 2 c. £6
ney, 5 t. 200

ssium Cyanide—
ney, 1 t. £120
bourne, 2 240
nantle, 1 6 c. 120
al, 10 54

ssium Nitrate—
khampton, 1 t. £29

ssium Prussiate—
na, 1 t. £60
horn, 15 c. 42
nenburg, 15 45
seilles, 1 2 55
York, 10 cks. 184
s, 2 115
sels, 11 32
igsberg, 1 14

petre –
con, 5 c. £6
lington, 1 t. 5 28
on, 3 13 74
khampton 2 4 46
de Janeiro, 1 6 32

p Dip—
cutta 60 dms. £44
Ayres 176 t. 16 c. 3,925
ta Arenas, 15 6 315
London, 26 2 100
Elizabeth, 35 19 570
ercargill, 20 cks. £80
tal. 1 9 35 63
Video, 37 19 834
e Town, 24 14 485

a—
de Janeiro, 1 t. 3 c. £3

a Alkali—
e Town, 1 t. £6
terdam. 8 5 c. 38

a Ash—
sbane, 20 brls. £28
lbourne, 2 t. 11 c. 15
maru, 1 8 11

a Crystals—
mantle, 5 t. 11 c. £14
onica, 15 3 30

a Salts—
mbay, 10 c. £20

ium Bicarbonate—
sbane, 20 kgs. £8
John N.B., 1 t. 7
pier, 2 3 c. 13

Sodium Bichromate—
Dunkirk, 4 t. 5 c. £140

Sodium Carbonate—
Natal, 1 t. £8

Sodium Peroxide—
Cape Town, 3 c. £16

Sodium Prussiate—
New York, 2 cks. £28

Sodium Silicate—
Rio de Janeiro, 2 t. 9 c. £10

Sodium Sulphate—
Ghent, 70 t. £105

Sulphites of Soda—
Lisbon, 1 t. 5 c. £7

Sulphur—
Rockhampton, 200 t. £716
Newcastle, 2 13

Sulphuric Acid—
Cape Town, 2 t. 12 c £32

Tartaric Acid—
Wellington, 2 c. £12
Lyttelton, 2 t. 44
Bombay, 6 36
Cape Town, 2 14
Perth, 5 34
Natal, 2 14
Adelaide, 10 58
Valencia, 5 30

Waste Salt—
Barcelona, 18 t 17 c. £140

Zinc Oxide—
Boston, 3 c. £18

LIVERPOOL.

Week ending October 14th.

Alum—
Melbourne, 3 t. 2 c. 1 q. £14
Cape Town, 1 14 8
B. Ayres, 1 6
Smyrna, 3 13 1 17
M. Video, 1 9 1 7

Aluminous Cake—
Melbourne, 6 t. 4 c. £19

Ammonium Carbonate –
Libau, 10 c. £14
Stettin, 11 1 q. 16
Sydney, 8 14
Melbourne, 1 t. 13 3 48
New York, 1 10 49
Norrkoping, 4 1 7
Rio de Janeiro, 9 15
Barcelona, 1 3 30
Sundsvaal, 1 10 41
Copenhagen 3 4 1 88

Ammonium Chloride—
Alexandria, 2 t. 10 c. £88
Galatz, 10 19
Piræus, 8 15
Syra, 4 7
Smyrna, 5 9
Rio de Janeiro, 5 3 q. 14
Trieste, 1 33
Hamburg, 1 21

Ammonium Sulphate—
Leghorn, 16 t. 6 c. £121
Palermo, 5 39
Santos, 2 1 3 q. 17
Nantes, 50 8 3 402
Gd. Canary, 4 2 3 33
Sourabaya 91 1 2 728
Bordeaux, 15 5 2 115
Barcelona. 9 16 3 78

Bleaching Powder—
Baltimore, 242 cks. 329 bgs.
Bari, 10
Boston, 665
Lisbon, 40 brls.
Montreal, 55
Newport News, 200
New York, 283 90 bxs.
Philadelphia, 179

Boracic Acid—
Antwerp, 1 t. 12 c. £49
Sydney, 1 34
Adelaide, 1 1 2 q. 41
Montreal, 1 13 1 50

Borax—
Durban, 10 c. £10
Palermo, 11 10
Antwerp, 5 t. 17 117
Rotterdam, 14 14
Hamburg, 46 15 1 q. 872
Valencia, 1 1 2 19
Naples, 1 18
Gijon, 5 1 90
Montreal, 21 4 3 404
Stettin, 5 19 118
Copenhagen, 8 1 144
Adelaide, 10 10
Sydney, 4 7 60

Calcium Chloride—
Rangoon, 1 t. 4 c. £3
B. Ayres, 10 2 23
Odessa, 10 4 21
Bilbao, 2 5

Carbolic Acid—
Toronto, 1 t. 5 c. £73
New York, 10 cks. 4 13 3 q. 385
Rotterdam, 10 10 612
Piræus, 2 2 8
Montreal. 12 2 36
Philadelphia, 11 cs. 60
Hamburg, 1 8 80
Newport News, 19 13 3 628

Caustic Potash—
Sydney, 1 t. 15 c. £32
Melbourne, 2 3 39
Antwerp, 5 105
New York, 1 12 31

Caustic Soda—
Ancona, 40 dms.
Barcelona, 530
Bari, 104
Batavia, 20
Bilbao, 60 46 pks.
Bombay, 35
Boston, 50 50 brls.
Calcutta, 33
Callao, 60
Catania, 30
E. London, 20
Fairwater, 35
Ferrol, 6
Fiume, 75
Genoa, 105
Ghent, 31
Hamburg, 25
Havana, 40
Hong Kong. 35
Leghorn, 30
Libau, 30
Lisbon, 46
Malaga. 55 10
Melbourne, 58 5
Montreal, 150
Nagasaki, 250
Nantes, 70
Naples, 28
N. Orleans, 150
Newport New. 50
New York, 600 20 bxs.
Odessa, 983
Penedo. 20
Pernambuco, 60
Philadelphia, 405
Quebec, 240
Rangoon, 52
Riga, 5
Rio de Janeiro, 5 cs.
Rouen, 17
San Sebastian, 34
Santander, 100
Smyrna, 15
Sourabaya, 60
Stettin, 118
Sydney, 29 2
Talavera de la Reina, 175
Tampico, 37
Tarragona, 30
Toronto, 50
Tripoli, 20 kgs.
Valencia. 120
Valparaiso, 10

Chemicals *(otherwise undescribed)*
Danzig, 1 t. £29
Hamburg, 1 30
Rio de Janeiro, 5 c. 1 q. 10
Sydney, 15 21
Alexandria, 2 70
Stettin, 4 3 128
Konigsberg, 5 9
Fiume, 10 17
Calcutta, 61 12 178
Genoa, 1 61
Boston, 5 305
B. Ayres, 27 13 3 309

China Clay—
Bombay, 28 cks.
Boston, 2,797 500 bgs.
B. Ayres, 40
Calcutta, 20
Montreal, 48
New York, 4
Philadelphia, 79
Rio de Janeiro, 30
Venice, 10

Citric Acid—
Montreal, 3 c. £19

Coal Products—
Alizarine
Sydney, 1 cs. 2 brls.
Aniline Salts
Boston, 40 cs.
Creosote Oil
Pernambuco, 8 cks.
Naphtha
Melbourne 40 dms.
Sydney, 40
Pitch
Barbadoes, 241 cs.
Cette, 1,580 t.
Rouen, 3 cks.
Tar
Accra, 50 rnlts.
Philadelphia, 150 brls.
Salt Pond, 3 bls.

Copper Sulphate—
Amsterdam, 2 t. 10 c. £38
Cette, 15 11 3 q. 260
E. London, 2 2 3
Mossel Bay, 1 2 2
Cape Town, 1 1
Paris, 5 4 80
Vancouver, 2 10 2 41
Galatz, 1 10 25
Odessa, 6 7 103
M. Video, 2 10 39
Stettin, 10 8
Victoria, B.C., 2 33
Rotterdam, 2 1 3 32
Melbourne, 60 10 1,008
Christiania, 19 16
Bari, 3 12 58
Boston, 44 18 3 691

Copperas—
Galatz, 3 t. 5 c. 3 q. £10
Heraklia, 6 16 12
Quebec, 3 10 8
Vera Cruz, 5 10 9

Disinfectants—
Cape Coast, 10 cs. £23
Pernambuco, 4 t. 9
Calcutta, 1 2 c. 2 q. 8
Kurrachee, 10 £4

Guano—
Malaga, 70 t. £360
Seville, 11 1 c. 90

Hydrochloric Acid—
Sydney, 1 c. 3 q. £6

Lime—
Accra, 46 t. 7 c. £179
Rotterdam, 5 5

Magnesia—
Barcelona, 6 cs.
B. Ayres, 20
Genoa, 1
Salonica, 2 tcs. 1 hd.
Adelaide, 11 c. 3 q. £27

Magnesium Sulphate—
Portland, 15 bls.
Varna, 3

Manure—
Teneriffe. 13 t. 5 c. £105
St Nazaire, 769 1 1 q. 2,146
Bordeaux, 50 4 1 194

Muriatic Acid—
Pernambuco, 1 t. 3 c. £13
Callao, 3 5

Nitre –
Bucaramanga, 4 c. £4

Oxalic Acid—
Melbourne, 3 t. 8 c. 1 q. £90
Konigsberg, 7 9
Boston, 6 16 2 218
Copenhagen, 6 1 8

Paint—
Accra, 118 kgs.
Beyrout, 20
Bilbao, 3 bxs.
B. Ayres, 30 cs. 5 cks. 30 pks.
Calcutta, 589 520 50 btls.
Cartagena, S.A., 20 dms.
Colombo, 18 4
Colon. 6 cs.
Dunkirk, 13 tins
Genoa, 30 bgs.
Gijon, 2 cs. 10
Gd. Canary, 105
Havana, 4
Ibrail, 2
Lagos, 1 2 154 25 dms.
La Libertad, 2 12
La Plata, 1 348
Mayaquez, 7 brls.
Porto Alegre, 4
Port Said. 4 bls.
St John, N'fld., 2
Santiago, 1 cs.
Savanilla, 22
Sierra Leone, 40
Sulina, 3
Trieste, 60
Victoria, W.A., 1 25
Yokohama, 1 bx. 2 12 8

Painters' Colours—

Alexandria,	21 cks.	180 kgs.	169 pks.	
Bilbao,	21			
Antwerp,	10			
Bombay,	4			
Boston,	16			
Newcastle,		20		
New York,	6		300 brls.	
Paris,			7	
Patras,			3	
Pernambuco,	1 cs.			
Rockhampton,	5	55	3	
Rotterdam,			60 bgs.	
San Sebastian,	20			
Santa Cruz de Teneriffe,		1		
Sierra Leone,	1	24	1 dm.	
Stettin,	15			
Smyrna,		100		
Sydney,	60 cs.	3	29	10 brls.
Syra,		3		1
Valparaiso,	31			
Vera Cruz.	12			
Victoria, W A ,	2 dms.			
Victoria, V.C.,		500		

Paraffin Wax—

Ancona,	50 bgs.		
Boston,			50 bxs.
Patras,	14	5 cs.	

Phosphorus—

B. Ayres,	1 t.	£200

Potash Salts—

Corinto,	4 t.	1 c.	2 q.	£476

Potassium Bichromate—

Copenhagen,	5 t.	3 c.	2 q.	£196

Potassium Carbonate —

Para,	1 t.	15 c.	£46

Potassium Chlorate—

Philadelphia,	5 t.			£188
Stockholm,	2	10 c.		97
Randers,	1			39
St. Petersburg,	12	10		434
Konigsberg,	5			174
Libau,	5			174
Riga,	13	8		481
Bucaramanga,		2		5
Rotterdam,	7			271
Montreal,		10		18
B. Ayres,		9		18
Hiogo,	22	10		789
Copenhagen,	1	2	2 q.	43
Kobe,	5			193
Hamburg,	1			38
Carril,		10		19
Mexico,	3			120

Potassium Prussiate—

Genoa,	2 t.	£110

Salt—

Accra,		9 c.	
Algoa Bay,	12 t.	13	
Antwerp,	175		
Boma,	20		
Boston,	552	10	
B. Ayres.	30		
C. C. Castle,	15		
Conakry,	10		
Egwanga,	20		
Galveston,	1,040		
Ghent,	200		
Iceland,	86		
Kingston,	13		
Loango,	8		
Malta,	4	10	
Manoh,	110		
Montreal,	1,752		
N. Orleans,	200		
New York,	165		1,000 sks.
Opobo,	25		
Para,	31	5	
Portland,	373	18	
Quebec,	199	10	
Rangoon,	1,234		
Rio de Janeiro,		4	
Rosario,		100 brls.	
Rotterdam,	200		
Rouen,			300 bgs.
St. John's, N'fd.,	10		
Salt Pond,			500
Sao Suizde,	60	5 c.	
Sette Camma,	10		
Sierra Leone,	50		
Stockholm,	98		
Sydney,	512	10	
Trangisvaag.	60		
Victoria, V.C ,	137		

Salt Cake—

Gijon,	29 t.	15 c.	£60
Antwerp,	48	14	63

Saltpetre—

Cabedello,	1 t.	13 c.	£37
Malta,		9	10
Malaga,		10	11

***Satinite*—**

Copenhagen,	*5 t.*	*14 c.*	*3 q.*	*£15*

Sheep Dip —

M. Video,	8 t.	18 c.	2 q.	£250
B. Ayres,	57	12	1	1,216
Rosario,	7			137

Soap—

Accra,	200 bxs.			
Addah,	20			20 cs.
Alexandria,	27			39
Algoa Bay,				20
Axim,				41
Barbadoes,				1
Bombay,	1,250			25
B. Ayres,				3
Calcutta,				29
C. C. Castle,	177			
Cape Town,	651	9 cks.		
Christiania,	40			
Curacao,	100			
Delagoa Bay,	1,995	6 bdls.		25
E. London,	601			50
Elmina,	50			
Funchal,				8
Gibraltar,	50			
Gd. Bassam,	200			20
Iquique,		20 dms.		
Kingston,	1,375			
Lagos,				71
Madras,				21
Manaos	300			
Mossel Bay,	403			
New York,	493			
Opobo,	310			
Old Calabar,	1,595			
Oporto,	1			
Para,	200			
Penang.				10
Philadelphia,				500
Piræus,		5 bdls.		
Pt. Elizabeth.	500			
Pt. Natal,	109	5		72
Pt. Said,	20			
Rangoon,	80			
Rotterdam,	10 brls.			1,042
St. Nazaire.	875 bxs.			
St. John's, N'fld ,	95			
Salt Pond,	100			
Samarang.				2
Santander,				2
Savanilla,				8
Singapore,	100			200
Syra				27
Teneriffe,	1,948			
Trinidad,				5
Valparaiso,	20			1
Vancouver.				10
Victoria, V.C.,				3
Victoria, W.A.,				1

Soda Alkali —

Bilbao,	60 brls.	
Odessa,	31	
Panama,	25	
Toronto,	35	

Soda Ash—

Ancona,	5 cks.		
Antwerp,			100 bgs.
Baltimore,	53		2,021
Barcelona,	14		
Batoum,	33		
Bombay,	30		
Boston,	47	47 tcs.	1,200
B. Ayres,	100		
Canea,		102 brls.	
Cheribon,	20		
Christiania,	9		
E. London,	36		
Gefle,	20	9 cs.	
Genoa,	18		350
Ghent,	8		380
Gothenburg,	111		
Hamburg,			400
Hiogo,	40		
M. Video,		15 brls.	
Montreal,			440
N. Orleans,	65	25 tcs.	
New York,	102	260	1,400
Para,	5		
Philadelphia,	217	64	1,600
Rotterdam,			250
St. John, N.B.,			133
Smyrna,		102 brls.	
Stettin,			200
Sydney,	248		
Syra,		150	
Tampico,			200
Varna,		50	
Venice,			100
Yokohama,	290		

Soda Crystals—

Alexandria,		145 brls.		
Baltimore,		400		
Boston,	55 cks.			150 bgs.
	140 pks.	140 brls.		
B. Ayres,		50		
Calcutta,				40 kgs.
Gibraltar,		25		
Malta,				50
M. Video,	60			
Montreal,	10	337		200
New York.				290 bgs.
Philadelphia,				700 kgs.
Quebec,		230		
Rosario,	10			
St. John's, N'fd.,		10		10
Salonica,		14		
Toronto,	75 bls.			
Valparaiso,				10

Soda Oxide—

Marseilles,	10 cs.	

Sodium Bicarbonate—

Alexandria,	70 kgs.		
Antwerp,			10 bgs.
Barbadoes,	100		
Bari,	78		
Batavia.	17		
Bilbao,	70		
Bombay,	60		200
B. Ayres,	20	44 cks.	
Calcutta,	500		
Cartagena, S.A.,		51 brls.	
Christiania,	30		
Galatz,	87		
Hamburg,	20		
Havre,	60		
Hiogo,	500		
Madras,		20 cks.	
Melbourne,	50		
Montreal,	76		
Naples,	20		
N. Orleans,	100	125	
Newport News,		175	
Odense,	100		
Odessa,	100		
Oporto,	10	5 brls.	
Palermo,	10	15 cks.	
Para.		10 brls.	
Pasages,	80		
Paris,	90		
Penang,			20
Perth,	50		
Pt. Natal,			20
Pt. Said,		2 cks.	
Quebec,	105		
Rangoon,		11	
Rosario,		18	
Rotterdam,	63		
St. John's, N'fld.	8		
Singapore,		16	
Smyrna,	100		
Sydney,	450		
Valencia,	75		
Victoria, V.C.,	2		
Yokohama,	500		

Sodium Carbonate—

Boston,	140 brls.	
Montreal,	140 kgs.	
New York,	110 bls.	

Sodium Chlorate—

Boston,	765 kgs.	
Rouen,	7 brls.	
St. Petersburg,	183	20

Sodium Prussiate—

Naples,	4 cks.

Sodium Silicate—

Lisbon,	120 cks.	
Malaga,	17 brls.	
Montreal,	25	
Newcastle,	6	14 dms.
Oporto,	19	
Piræus,	20	
Seville,	50	
Valencia,	30	

Sodium Sulphate—

Boston,	10 bgs.

Strontia—

Hamburg,	159 t.	4 c	£1,300

Sulphur—

Montreal,	100 t.	1 c.		£362
Boston	380	8		1,461
Cabedello,		5	1 q.	9
Vera Cruz,	1	19	1	12
Lagos,	1	1		7
Bahia,	1	1	2	7

Sulphuric Acid—

Pernambuco.	3 c.		£1
Porto Alegre,	18	3 q.	10
Manaos,	7		6

Superphosphates—

Bordeaux,	125 t.	4 c.	3 q	£148
Nantes,	933	6	3	529

Tartaric Acid—

Mazatlan,	2 c.	1 q.	£13

Varnish—

Alexandria,	5 cs.	
B. Ayres,	1 ck.	
Genoa,	9	
Havana,	2	
Madras,	3	
Paris,	2	
Sydney,	15	

Whiting—

Pt. Natal,	10 brls.

MANCHESTER

Week ending October 14th.

Ammonium Carbonate—

Copenhagen,	5 cks.	13 pks.

Aniline Oil —

Antwerp,	5 dms.
Rotterdam,	10

Aniline Salt —

Rotterdam,	90 cks.

Bleaching Powder—

Rio de Janeiro,	2 cs.

Carbolic Acid—

Treport,	6 cs.

Caustic Potash—

Melbourne,	10 cks.

Caustic Soda—

Bagdad,	50 dms.
Rio de Janeiro,	8

Chemicals (*otherwise* [illegible])

Bushire,	8 cs.

Creosote Salts —

Treport,	32 cks.

Dyestuffs (*otherwise* [illegible])

Christiania,	4 cks	1 bx

Extracts—

Rouen,	10 cks.

Glue—

Antwerp,	10 cks.
Rotterdam.	10

Mineral White—

Rio de Janeiro.	10 bgs.

Paraffin Wax—

Hamburg.	30 bgs.

Potassium Prussiate—

Copenhagen,	4 cks.

Salt—

Rotterdam,	200 t.

Soap—

Treport,	226 bxs.

Soda—

Rio de Janeiro,	2 brls.

Sodium Silicate—

Bagdad,	4 brls.

Tar Oil—

Treport,	26 cks.

Tar Salts—

Copenhagen,	4 cks.

Toluol —

Rotterdam,	30 cks.

Varnish—

Rio de Janeiro,	8 brls.
Bagdad,	100 bxs 2 cs.

HULL.

Week ending October 10th.

Alkali—

Abo,	10 cks. 10 cs. 50 brls

Ammonium Sulphate—

Bordeaux,	200 bgs.
Dunkirk,	429
Genoa.	91
Hamburg,	200
Rouen	200

Antimony—

St. Petersburg,	80 cs.

Bleaching Powder—

Leghorn,	48 cks
Stettin.	67

Borax—

Abo,	3 cks.

Caustic Soda—

Abo,	1 ck.
Genoa.	31 dms
Helsingfors,	7
Wasa.	5

Chemicals (*otherwise* [illegible])

Abo,	2 cks. 7 cs	
Amsterdam,	87	14 bbls.
Antwerp,	20	
Bordeaux,	20	
Bombay,	1,063	2 c gks.
Bremen,	20	91
Bergen.	5	
Christiania.	1,949 slbs.	63
Gothenburg,	12	8
Genoa,	13 cks.	
Hamburg.	10	45
Helsingfors,	1	
Kurrachee,	207	140
Libau,		19
Naples,		
Rotterdam,		
Riga,		
Rouen.		

ttin, 3
wanger, 5
ckholm, 1
aborg, 1
sa, 3
rburg, 184
Petersburg, 4

onseed Oil—
sterdam, 1,212 c.
werp. 722
ristiansand, 17
henburg, 70
nt, 21
werp, 369
rseilles, 400
terdam, 1,055
ttin, 136
ckholm, 200

tuffs *(otherwise undes.)*—
istiania, 30 bgs.
les, 3 cks.
tin, 1 1 cs.

—
kirk, 20 cks.

io—
kirk, 37 t.

eed Oil—
terdam, 51 c.
werp, 84
leaux, 35
bay, 466
nen, 106
gen, 50
stiania, 678
stiansund, 36
stiansand, 35
ntheim, 35
burg, 18
singfors, 62
rachee, 54
anger, 21
kholm, 20

ure—
leaux, 612 bgs.
orn, 503
kholm, 1
in, 258 t.

tha—
'etersburg, 5 cks.

e—
erdam, 6 cks.

ers' Colours—
erp, 23 cks. 98 pks.
bay, 6 73 cs. 677
nen, 1
en, 100 dms. 2
tiania, 2 2 40
theim, 35
enburg, 6
a, 20
t, 21
burg, 13
eilles, 11
rdam, 4 8
n, 16
etersburg, 57 1
in, 38 200 t.
holm, 5
urg, 2
irk, 2

fin Wax—
4 brls.

hate—
e, 1,900 t.

—
etersburg, 1 ck.

—
irk, 1 ck.
nger, 20 cs.
holm, 25

h—
n, 32 pks.

w—
erdam, 34 cks
ay, 26
irk, 67
a, 32

erdam, 8 brls.
rdam, 3 cks. 1
irk, 90

le—
51 cks.

sh—
erp, 3 cs.
3 cks.
eilles, 3
rdam, 1
a, 11

ng—
erp, 35 cks.

GLASGOW.

Week ending October 15th.

Ammonium Sulphate—
Philadelphia, 49 t. 17¾ c.
Hamburg, 30 9
Barcelona, 61 5¾
France, 5 1¾
Paris, 26 8½
Valencia, 120 2¼

Asbestos—
Singapore, £22

Coal Products—
Creosote
France, £475
Naphtha
France, £45
Rouen, 200
Pitch
U.S.A., £424
Danzig, 82 t. 13 c.
Hamburg, 10 15
Calcutta, 44
France, 350
Madras, £24. 15s.
Norrkoping, 100 brls.
Canada, £95
Tar
Danzig, 874 brls.
Riga, 155
Calcutta, £246
Madras, £42. 10s.
U.S.A. £55
Norrkoping, 984
Tar Acids
U.S.A., £30

Coal Products *(otherwise undes)*—
Rotterdam. £410

Cream of Tartar Substitute—
Melbourne, £39
Sydney, 39

Dried Blood—
Paris, 40 t. 6¾ c.

Dyestuffs *(otherwise undescribed)*
Queensland, £22. 19s.
New York, 36 12
U.S.A., 113

Extracts—
Canada, £476
Victoria, 104
Boston, 74
Malaunay, 66

Gelatine—
Canada, £146
New York, 260
Philadelphia, 209

Glucose—
Canada, 2 t.

Indigo—
Queensland, £45. 13s.

Iodine—
Rotterdam, £2.0

Lead Acetate—
Bombay, £79

Linseed Oil—
Alexandria, 4 t. 2¾ c.
Cape Town. 17
Pt. Elizabeth, 1 ¾
Melbourne, 1 9¼

Litharge—
Bombay, £24

Logwood—
Canada, £98
Queensland, 70

Ochre—
Alexandria, £33

Paint—
Pt Elizabeth, £28
Trieste, 121
Brisbane, 86
Melbourne, 57
Singapore, 115
Sydney, 113
Bombay, 33
Calcutta, 52
Colombo, qty.
Havana, 42
Madras, "
Yokohama, 24
Canada, 30

Painters' Colours—
Calcutta, £132
Bathurst, qty.
Brisbane, 20
Port Pirie, "

Paraffin Wax—
Venice, £73
Danzig, 12 t. 14 c.
Riga, 8 4
Christiania, 11
Barcelona, 217
Stockholm, 320
Fiume, 96
Rouen, 83

Potash Salts—
Singapore, £87

Potassium Bichromate—
Venice, £408
Melbourne, 50
Queensland, £41. 10 cs.
Victoria, £63
Christiania, 188
Rotterdam, 302
Bombay, 164
Canada, 132
Rouen, 234
Stockholm, 186

Salt—
Reykjavik, 149 t.

Soap—
Bombay, 2 t. 19¼ c.
New York, 83 lbs.
Puerto Cortes, 3 t. 10

Sodium Bichromate—
Venice, 19 c.
Bombay, £42
Canada, 3 t. 2½
Rouen, 13 14
Stockholm, 30

Tallow—
Danzig, 8 t. 11 c.

Treacle—
E. London, 1 t. 12¼ c.
Christiania, 34 16
Norrkoping, 77 12

Varnish—
Calcutta, £20
Pt. Elizabeth, £33. 13s.
Brisbane, £62
Melbourne, 154

White Lead—
Algoa Bay, 10 t. 12½ c.
Calcutta, £75

Zinc Ashes—
Rotterdam, 13 t.

TYNE.

Week ending October 10th.

Alkali—
Kalmar, 43 t. 4 c.
Hamburg, 5 19
Rotterdam, 6 5
Gothenburg, 6 18
Christiania, 26 10

Alumina Sulphate—
Lisbon, 9 t. 18 c.

Aluminous Cake—
Copenhagen, 51 t. 11 c.

Ammonium Carbonate—
Barcelona, 1 t. 10 c.

Ammonium Sulphate—
Genoa, 25 t.

Antimony—
Hamburg, 10 t.
Rotterdam, 4
Copenhagen, 6 c.

Arsenic—
Barcelona, 6 c

Asbestos—
Antwerp, 2 c.

Barium Binoxide—
Rotterdam, 5 t.
Barcelona, 1 10 c.

Barium Carbonate—
Rotterdam, 150 t.

Bleaching Powder—
Hamburg, 48 t. 1 c.
Antwerp, 64 19
Bordeaux, 50 2
Rotterdam, 17 19
Amsterdam, 10 4
Copenhagen, 35 17
Bergen, 15 7
Gothenburg, 5 2
Genoa, 11 3

Carbolic Acid—
Rotterdam, 5 t. 13 c.

Caustic Soda—
Tunis, 15 t. 5 c.
Hamburg, 14 10
Antwerp, 14 19
Rotterdam, 10 3
Amsterdam, 4 8
Copenhagen, 1 15
Barcelona, 163 5
Harlingen, 10 10
Bergen, 3 9
Gothenburg, 4 18
Genoa, 24 13

Copperas—
Oporto, 1 t. 13 c.

Litharge—
Rotterdam, 11 c.
Lisbon, 17

Magnesia—
Hamburg, 2 t. 2 c.
Barcelona, 8 3
Genoa, 11 11
Tunis, 1

Manure—
Leghorn, 35 t.
Gandia, 80

Ochre—
Christiania, 16 c.

Paint—
Antwerp, 7 lbs.
Ergasteria, 2 c.
Rostock, 11
Bergen, 5
Christiania, 4

Paraffin Wax—
Barcelona, 5 t.

Potash—
Ergasteria, 1 q.

Soap—
Copenhagen, 5 c.

Soda—
Tunis 3 t. 2 c.
Ancona, 10 5
Antwerp, 5
Naples, 1 15
Palermo, 2 1
Leghorn, 5
Rotterdam, 23 1
Amsterdam, 10
Harlingen, 10 3
Genoa, 22 2
Christiania, 20 8

Soda Ash—
Ghent, 10 t. 3 c.
Lisbon, 9 18
Christiania, 13 7

Sodium Silicate—
Tunis, 7 t. 2 c.
Lisbon, 10 2

Sodium Sulphate—
Antwerp, 50 t. 2
Lisbon, 30 16

Sulphur—
Ghent, 6 t. 1 c.
Gothenburg, 20
Christiania, 20

Tallow—
Genoa, 7 t. 5 c.

Turpentine—
Ergasteria, 20 lbs.

Varnish—
Ergasteria, 20 lbs.
Genoa, 1 t. 5 c.

White Lead—
Lisbon, 5 t. 9 c.
Christiania, 11

Zinc Ashes—
Antwerp, 1 t. 8 c.

GOOLE.

Week ending October 7th.

Benzol—
Boulogne, 24 cks.
Rotterdam, 72

Chemicals *(otherwise undescribed)*
Antwerp, 1 pk.
Hamburg, 40 cks.

Coal Products *(otherwise unaes.)*—
Amsterdam, 25 cks.
Antwerp, 1 1 cs.
Boulogne, 51 2
Hamburg, 1
Rotterdam, 101

Dyestuffs *(otherwise undescribed)*
Hamburg, 25 bgs.

Manure—
Dunkirk, 500 bgs.
Rotterdam, 184

Pitch—
Antwerp, 515 t.
Rouen, 200

GRIMSBY.

Week ending October 10th.

Chemicals *(otherwise undescribed)*
Dieppe, 9 cks. 1 cs.

Coal Products *(otherwise undes.)*—
Dieppe, 63 cks. 2 cs.
Hamburg, 1 6 pks.

PRICES CURRENT. WEDNESDAY, OCTOBER 21ST, 1896

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids :—			
Acetic, 25 °/. and 40 °/. per cwt.	5/10½ & 8/9		
,, Glacial .. .. ,,		40/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/.) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	21	17	6
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880 = 28° B. .. .. per lb.	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. per ton	7	7	6
,, ,, (grey) Hull .. .. ,,	7	2	6
Aniline Oil (pure) .. .. per lb.	0	0	10½
Aniline Salt ,, ... ,,	0	0	9½
Antimony .. .. per ton	29	5	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	4	6
,, 50/90 ,, ... ,,	0	3	3
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	1	9½
Creosote (ordinary) .. .. ,,	0	0	1½
,, (filtered for Lucigen light) .. .. ,,	0	0	2
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	47	12	6
,, Sulphate .. .. ,,	16	0	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	42	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	7	6
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	22	0	0
,, ,, brown ,,) .. .. ,,	14	15	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	7	6
,, ,, (grey) (ex ship .. .. ,,	8	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	6
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magnesia .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	0	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	8
Oils :—			
Cotton-seed .. .. per ton	17	0	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	7
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	10	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	6
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	6¾
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5
,, Borate (Borax) .. .. net, per ton.	19	10	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	7	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	7	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	6
,, Sulphate (Salt-cake) .. .. per ton.	0	19	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	9½
Sulphur (Flowers) .. .. per ton.	7	0	0
(Roll Brimstone) .. .. ,,	6	5	0
,, Brimstone : Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	8½
,, English Ingots .. .. per ton	62	10	0
Zinc Spelter .. .. ,,	16	7	6
,, Chloride (solution, 102° Tw.) .. .. ,,	5	2	6

THE

CHEMICAL TRADE JOURNAL

AND

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E ADVERTISEMENTS.

CHEMIST, aged 30 years, formerly pupil at the olytechnic School of Zurich (Switzerland), an experienced Analyst, knowing English, French, German, and Russian desires a Situation in Industrial Laboratory, or as Agent in England or abroad. Very good references — "A. J. J.," *Chemical Trade Journal* Office, Manchester.

CHROMATE OF POTASH.—Manufacturing hemist Wanted—able to undertake the manufacture of Bichromate of from Chloride of Potash, and to superintend the erection of Plant and s. Will be required also to do laboratory work. Preference given to an t well up in electrolysis.—Address, giving particulars of previous employge, salary required, to "Chemistry," c/o Messrs. Deacon and Co., 154, all-street, London, E.C.

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CURRENT TOPICS.

THERE IS GOOD IN EVERYTHING.

THE disposal of waste products is a problem which in one form or another never ceases to present itself for solution.

One of the most troublesome branches of this problem is that which has its origin, not so much in actual bye-products, as in damaged produce, such as condemned meat, fish, and certain practically worthless materials which have to be taken along with what is really valuable and made the best of.

A process which has for its *raison d'être* such an object, is worthy of special notice, not only on account of any intrinsic merit, but also for the encouragement it gives, by affording an example of how, little by little, serious drawbacks, incidental to certain industries and various noxious waste products, are happily disposed of through the activity of those engaged in enterprises quite foreign to the evils cured.

It is mainly for the foregoing reasons that we draw attention to the starting of the Irish Fish Oil and Guano Syndicate, Ltd. Of course a concern that is founded on sound premises has every prospect of success, but we speak without prejudice when reciting the chief features of this Syndicate, our prevailing desire being to commend the principles involved rather than any particular circumstance.

It appears that a small works at Alperton is engaged in the manufacture of fish oil and fish guano, which has been reported on very favourably by Mr. Bernard Dyer. Presumably, as the outcome of the success of this process, the Irish Syndicate have acquired the patent of Mr. J. C. Stanley for the treatment of fish and fish offal.

On the coast of Ireland there is frequently a glut of fish, also the abundance of dog-fish, ray, etc., is a great trouble to those engaged in the fishing industry, and it was on account of these two circumstances that this Syndicate decided to erect works at Valentia Harbour. As will be seen, there is a prospect of an abundant supply of raw material, part of which must be disposed of somehow. The manufactured products also promise to prove readily merchantable, as the oil is good and the Syndicate have offers to take up a very large proportion of their make of guano.

Before leaving the subject of the Syndicate itself, it will be interesting to mention that the capital of £10,000. has been subscribed. The directorate comprises Lieutenant-Colonel R. F. H. Macgregor (who is also the Chairman of the Dublin and Wicklow Manure Co., Ltd.), C. L. Townshend, Esq., G. Georgeson, Esq., M.P. (one of the largest Irish curers), and Mr. J. C. Stanley, who will act as managing director.

The process itself is simple. The oil is first extracted, by which means the emission of objectionable smells in the subsequent drying is avoided. This latter claim seems to be supported by testimony from several quarters, and certainly it is a great feature if the smell can even be sufficiently reduced

to ensure the process never proving a nuisance. After the extraction of the oil, and drying, the fibre and bone are separated, so that a higher and a lower grade guano can be prepared, containing about 12% and 6% of ammonia respectively, the lower grade naturally being comparatively rich in phosphates to the extent of about 28% to 36%.

It will therefore be seen that the scheme is emphatically feasible, and in these tight days it is truly encouraging to hear of the growth of processes which bid fair to render complications and nuisances such as gluts, dog-fish, and offal things to be no longer dreaded, but, on the contrary, faced with complacency if not actually welcomed.

SMOKE—A SUGGESTION.

The past week has given us abundant evidence that the period of fogs is once more upon us, and as it is customary for the so-called smoke nuisance to spring into prominence concurrently the present is a fitting time to make a suggestion on this matter.

Black smoke, whatever these two words may be taken to define, is not a thing of beauty, neither is it useful, but there are many things which are neither the one nor the other, and yet cannot well be exterminated.

Whatever may be said about the importance of suppressing black smoke the fact still remains that so far there is practically no means of coping with any furnaces other than boilers. Household smoke, the acknowledged nucleus of town fogs, and the unavoidable products of intermittent firing in chemical works, ironworks, and potteries, are as hopelessly unmanageable to-day as they were ten years ago. The time-worn retort of "use coke or gaseous fuel" is only a feeble and shifty expedient for begging the question. It has answered in certain cases, but if, as is so frequently asserted, by adopting gaseous firing "all the difficulties disappear," it is a pity the method of applying this universal solvent of all troubles and prosecutions is not more fully exploited by those who so glibly advocate it.

There is also another point. As far as can be made out, there is at present no distinction made between the works that emit smoke in small quantities from a few comparatively short chimneys, and the large works that discharge the united products from perhaps fifty furnaces, from one central stack. For example, under the fifteen minutes' limit, which is enforced in some towns, with five furnaces fired in rotation and each having a chimney, ten minutes' black smoke would escape a fine. Yet the same number of furnaces fired in the same rotation, but with only one chimney, would necessitate an appearance in the Police Court, even if each furnace had only emitted black smoke for four minutes, instead of ten.

Such difficulties can only be adjusted through the agency of thoughtful local government, and, as the time of municipal elections is now approaching, when the public have an opportunity of commanding the attention of their representatives, would it not be a wise thing for all candidates in industrial centres to be put to the test on this point? There are a great many interested in and affected by the question, and, to a very large extent, they have their welfare in their own hands. Now is the time to see to it.

Oil Gas Enrichment Co., Ltd.—The report of the directors of this company for the fifteen months from 1st July, 1895, to 30th Sept., 1896, states that the balance at the credit of profit and loss account is £581., which the directors recommend be disposed of as follows:—To pay a fixed dividend of 5 per cent. on the Preference or A shares for the fifteen months, £312.; to write off one-third balance of £487. of preliminary expenses, £162.; leaving to be carried forward to next year £106.

The Patent List.

This list is compiled from Official sources in the Manch Technical Laboratory, under the immediate supervision George E. Davis and Alfred R. Davis, who report professio upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Treatment of Ground Slags for Use as Fertilizers. C. H. and A Langdale. 22,666. October 13.

Porous Carbon Blocks for Filters. J. B. Fenby. 22,675. October 13.

Apparatus for Mixing and Conveying Acids for Use in Manufactu Nitro-glycerine and other Manufactures. G. Kynoch and Co., and A. T. Cocking. 22,717. October 13.

Improved Process for De-nitrating Acid Used in the Manufactu Nitro-glycerine. G. Kynoch and Co., Ltd., and A. T. Cocking. October 13.

Extracting Nickel and Producing Iron Oxide Pigments. T. S 22,721. October 13.

Improved Filter for Sewage Effluents, etc. C. Fell. 22,768. Octobe

Bleaching Compounds. J. W. Chenhall. 22,798. October 14.

Bleaching Cotton and other Vegetable Textile Materials. J. 22,823. October 14.

Improvements in Manufacture of Paper. R. A. McLaurin, and Messrs and McLaurin. 22,848. October 15.

Purifying and Deodourizing Butter and other Solid Fats and J. G. and A. Hargrave. 22,873. October 15.

Substitute for Leather, Paper, etc. F. Billing and A. Letallic. October 16.

Improved Manufacture of Soap Powder. F. W. Wright and The U Alkali Co., Ltd. 23,025. October 16.

Apparatus for the Treatment of Sewage, etc. D. C. Cameron, Commin, and A. J. Martin. 23,042. October 17.

Waterproof Cellulose. C. E Challis. 23,094. October 17.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Jour and ALL RIGHTS *of publication are* RESERVED. *This is the ear series of abstracts of Chemical and allied patents accessible to public.*

Improvements in a Process and Apparatus for the Electro Production of Metallic Zinc and Metallic Copper from Zinc containing Copper, and Oxygen Gas as a Bye-product. Burghardt, 35, Fountain-street, Manchester, and G. Rigg, 1, Ellesmere Eccles. Eng. Pat. 19,934. October 23, 1895.

The ores are first roasted at a temperature sufficiently high to en the conversion of any sulphates into oxides. The calcined mass is crushed and agitated with a solution of ammonium carbonate, se carbonate, or bicarbonate. A solution of ammonia gas in water ca used, but if it is no oxygen gas is evolved in the subsequent stag the process. Throughout the treatment with the ammonium compo the contents of the vats are protected from the air and loss of amm by a layer of light mineral oil. By this treatment the oxides of co and zinc are rapidly dissolved, and a certain amount of oxide of the presence of which is detrimental, as it causes the electrolyti deposited zinc to fall from the negative pole in a spongy condition to re-enter into solution. After settling the clear liquor is run off, the dissolved iron removed by adding hydrated oxide of tin temperature of 40°C, well agitating, and then allowing the w to settle again. The copper is removed from the clear liquo deposition, on plates of metallic zinc, or tin and zinc, the latter b finally recovered by electrolysis in suitable tanks. The poles mos of zinc and tin or lead. Oxygen is given off at the positive pole no hydrogen is liberated; the electrolyte after certain precaution used to leach a fresh batch of ore. The oxide of tin can be freed f iron by treatment with sulphuric acid, and so rendered fit for re The copper deposited on the zinc is stated to be quite free from ox owing to the exclusion of the air by the light mineral oil.

Improvements in the Treatment of Impure Bismuth for Refining Same. B. Zaborski, F. Hurter, and J. Brock, all of Gre, Exch buildings, Liverpool. Eng. Pat. 22,151. November 21, 1895.

The object is to separate the lead which generally contamin bismuth. Anodes of the impure bismuth, enclosed in a muslin bag retain any small particles that might become detached, and cathode carbon or pure bismuth are used to electrolyse a solution of weak ni acid, or bismuth nitrate containing 12 to 15 % of free acid. diaphragm is necessary, but the current must be very nicely adju to about 15 amperes, and certainly so as not to exceed 30 amperes square foot. The lead in the anode goes into solution in the elec lyte, but the bismuth is deposited at the cathode, from which it detac itself and collects at the bottom of the cell, which is conical. bismuth deposits as a fine black powder if the current density is

but when properly regulated it soon assumes the crystalline The electrolyte is changed from time to time as it becomes rich There must always be 8 % of free acid.

ements in Electrodes suitable for Electrolytic Apparatus. C. ner, 29, Wasagasse, Vienna IX., Austria. Eng. Pat. 22,207. November 21,

ite the cheapness of carbon electrodes, their friability often them expensive on account of upkeep. As platinum electrodes are too flimsy, the following combination is suggested. A thin sheath of iridium platinum, which is preferably provided with rib-like projections, is carried by a metallic body, which is cast platinum tube so as to support it. To avoid damaging the free the electrodes when placing them in the cells, they are pro- by small cups filled in with paraffin wax. There are four one of which shows the arrangement for bi-polar connection.

for the Manufacture of Phosphates of Ammonia and Potash in Alkaline Mixture suitable for Manure. T. Jamieson, Glasterberry, timber, Aberdeen. Eng. Pat. 18,635. October 5, 1895.

urated solution of potassium or ammonium sulphate is added to osphate. The mass first becomes limpid, then thickens, and, ed to stand, would solidify. When the thickening begins, dry matter, such as bran, fish powder, peat dust, etc, is well in, the whole mass finally drying to a moderately dry and solid. To this is added more organic matter, which has taken uch of a concentrated solution of potassium carbonate as it will Enough of this organic matter is added to render the whole intly alkaline. Enrichment with phosphoric acid and nitrogen so be effected by the addition of suitable ingredients. The ges claimed are economy in production, the avoidance of tion, and the retention of all the residual products, such as e of lime, in the finished fertilizer.

r or Improved Process of Manufacture of Petroleum Soap. . von Graeve, 65, Adlerstrasse, Düsseldorf, Germany. Eng. Pat. 18,760. ber 7, 1895.

fatty ingredients, with or without the addition of carnauba wax, ted to about 100°C., with nitric acid, and then saponified with or carbonated alkali. If desirable, a small quantity of ia may be incorporated, but the admissability of this addition s largely upon the nature of the fatty matters employed.

NDUSTRIAL ACCIDENTS IN GERMANY.

following is a return of the industrial accidents that occurred Germany during 1895 :—

INCE EAST PRUSSIA.—There were 1,327 accidents, 16 of roved fatal.

T PRUSSIA.—1,565 accidents, 10 fatal.

DAM.—2,764 accidents, 25 fatal.

e aniline works at Rumburg a workman died of arsenic poison- enic hydride having been evolved.

NKFURT-ON-ODER.—There were 2,017 accidents, 28 of which fatal. At an explosives works a man died from inhaling nitrous

IN. AND CHARLOTTENBURG.—Accidents 5,010, being 723 an in the former year; 12 fatal. One death was occasioned ling vapour of carbon disulphide. At the Berlin Gasworks a d with symptoms of heat stroke on leaving the retort-house. mber of cases of lead-poisoning in the accumulator works was gh.

ERANIA.—2,107 cases, 22 fatal. In Posen, 1,509 accidents, 37 iefly at sugar works.

LAU.—3,254 accidents, 35 fatal. Five men were taken ill after out a Glover tower, and one died. The state of health at the ad works is very unfavourable. At the great arsenic works ere no accidents.

NITE.—20 fatal accidents.

LN.—5,504 accidents, or 354 more than in the previous year.

DEBURG.—3,694 accidents, 23 fatal.

SEBURG.—2,011 accidents, 19 deaths. Increased precautions en adopted in the traffiic with liquid carbonic acid. A man was hilst thawing frozen dynamite, and two others were injured. araffin itch" seems to be disappearing. No special diseases en observed at the chrome-works.

RT.—748 accidents, 8 fatal.

VIC.—2,906 cases. Twelve soldiers died from the explosion of lo boat. At a tannery there occurred two cases of splenic ne of which proved fatal. At a metal works a man died from rus-necrosis.

HANOVER, STADE, OSNABRUCK, AND AURICH.—3,522 accidents. A severe explosion took place at a manure works during the extraction of fat from leather waste. The assumed safety of glass lamps against fire is called in question.

MUNSTER.—Accidents, 837 cases, *i.e.*, 20 per cent. more than in the previous year; 38 of the accidents proved fatal.

MINDEN.—712 cases. An explosion took place at a glass works; the cause doubtful. One man was killed and two severely injured.

ARNSBERG.—8,653 accidents, 83 of which proved fatal. At the ammonia works at Bulmke a boiler exploded. Two men died the same night from the burns.

CASSEL.—1,059 cases, 9 fatal. Six cases of splenic fever occurred at a works for weaving horse hair, one of which proved fatal. No cases of phosphoric necrosis have been announced, but two seem to have been kept secret.

WIESBADEN.—2,306 cases. A workman entered an apparatus before it had been freed from poisonous gases, and was suffocated. Two workmen perished by burning in a lacquer-works, from neglect of orders. At a chemical works anilism becomes frequent in summer during the preparations of benzol and toluol. Lead colic occurred at lead-works and at accumulator-works.

COBLENTZ —796 cases, as against 736 the previous year; 14 fatal.

DUSSELDORF.—Accidents 13,324, deaths 61. At a blue dye-works a man fell into a tank of chromic acid, and died in consequence. A man at another works fell into a boiling dye-pan. At a works where chrome lyes were regenerated, chrome ulcers occurred in considerable number. At a chemical works where nitro-benzol was manufactured, there occurred serious symptoms of disease, such as fainting, dizziness, and paralysis.

COLOGNE.—Cases 3,648, deaths 41.

TRIER.—2,291 cases, deaths 27. Mischief was occasioned by the dust of Thomas and Gilchrist slags.

AACHEN.—1,973 cases, deaths 18. Lead diseases occurred in the metallurgical establishments.

The laws enacted to restrict the employment of young boys and girls have done more harm than good. The children are now made to work at home on very low wages.—*Chemiker Zeitung.*

THE WEST RIDING OF YORKSHIRE RIVERS' BOARD.—We are informed that Dr. H. M. Wilson, of Shrewsbury, has been appointed chief inspector of the rivers of the West Riding. The appointment was made on the 16th inst., by a committee of seven, the chairman being C. G. Milnes-Gaskell, Esq., of Thornes House, Wakefield, and Wenlock Abbey, near Shrewsbury. There were upwards of eighty applicants.

THE AUTO-CAR IN HULL.—The auto-car has been early to make its appearance in Hull, for which the town is indebted to an enterprising firm of drapers and mercers. It might have been thought that a soap or metal polish manufacturer would have been the first to adopt this novel means of advertising, for the car is a source of considerable interest to pedestrians. It is constructed much as an ordinary car or 'bus, and is of French manufacture. It is worked by petroleum, and travels (or is capable of travelling) 15 miles an hour. Its hill climbing capacity is as one in eight, and its brake power is such that it can be pulled up in three yards when going at full speed. It is easy to steer. When going at slow speed there is a disagreeable vibration, which is accounted for by the fact that the motor has always to run at full pressure, the speed being regulated by the brake only. Thus the slower the speedthe greater the vibration.

BLEACHING AND DISINFECTING PATENTS.—A sitting was recently held for the public examination of E. J. Paterson and C. Friende Cooper, trading at Dalston, Westminster, and Glasgow, as electrical engineers and contractors, under the style of Paterson and Cooper. The debtors had filed accounts showing gross liabilities £19,514. (unsecured £9,463.). and assets valued at sufficient to provide a surplus of £7,000. odd. In the course of his evidence, the debtor Paterson stated that in addition to their business as electrical engineers, they had during the past ten years had a half share in certain patented processes for bleaching and disinfecting by electrolysis, of which patent processes Mr. Hermite, of Paris, was the inventor. They had been working continuously upon them throughout, with the result that they were now over £12,000. out of pocket. Patents had been taken out in nearly every country. A French company had taken over the French and Belgian patents, and an English company (the Hermite International Electrical Sanitation Company, Limited) has been recently formed, with a capital of £300,000., to take over the English and other patents. They attributed their failure to the withdrawal of capital from their business for the purposes of the patents, to delay in floating the English company, and to heavy interest and law costs. The patents were still of considerable value; negotiations were still pending for their sale; and their solvency depended upon whether they obtained a fair price for them. The examination was concluded.

Official Memoranda.

(From the Board of Trade Journal.)

CUSTOMS TARIFF OF VICTORIA.

The following is a special abstract of customs dues now payable on goods imported into the colony of Victoria, continued from p. 114 :—

	Rates of Duty. £ s. d.
Muriatic acid ..... per cwt	0 5 0
Nitrate of silver	*Free.*
Nitric acid ..... per cwt.	0 5 0
Paints and colours in oil ..... per ton.	2 0 0
Paints and colours ready for use..... ,,	4 0 0
White lead (dry) ..... ,,	2 0 0
Palm oil (bulk).....	*Free.*
Paraffin wax ..... per lb.	0 0 1
Patent dryers ..... per ton.	2 0 0
Pitch	25% *ad val.*

CUSTOMS TARIFF OF ST. LUCIA.

The following is an abstract of the import dues now levied :—

	Rates of Duty. s. d.
Candles, tallow ..... per lb.	0 1
Candles, other sorts ..... ,,	0 2
Indigo..... ,,	0 6
Lime, building ..... per barrel	0 6
Petroleum, crude or refined..... per gallon	0 2½
Pitch, rosin, and tar ..... per barrel	2 6
Salt, coarse..... ,,	0 9
Salt, table..... per 100 lbs.	1 0
Soap, fancy and medicinal, &c.....	20% *ad val.*
Soap, other than fancy ..... per 100 lbs.	2 6
Tallow ..... ,,	2 6
Turpentine, spirits of..... per gallon	0 6

EXEMPTIONS.

The following articles are admitted free of any duty, when to be used in connection with sugar manufacture :—Animal charcoal, chemicals, filter bags and cloths, filter presses, lime (temper), sulphur. *General* :—Bones and horns, fertilizers (all kinds).

THE MANUFACTURE OF MARGARINE.

Margarine is a product which has been talked of a great deal for some time in many countries. All the Parliaments of Western Europe have been successively filled with projects of law relating to the rules of commerce in this commodity, but, in spite of all the commotion which this article has caused, there are very few people who have an exact idea of its fabrication. The following details are from a study of the subject, made by Mons. Villon, who is well known as a chemist and analyst. The true name of this matter is oleo-margarine, and it is the liquid part which flows from tallow when it is pressed warm. The tallow employed is that which is known under the name of the "first juice," and comes from the melting at a low temperature of fat fresh from the butcher. This first juice is composed of solid stearine, fusible at 100°F., and olein (an oily liquid). The first operation consists of separating the liquid from the solids in the first juice, which is called tallow.

The solid tallow is put in cloths of strong linen, so that they form covered cakes, which are then loaded on to the hydraulic press. Upon the bed of the press is placed a strong plate of sheet iron, heated in water at 122°F., and on it are put five cakes of tallow, then another plate of sheet iron, and so on until the press is full. Generally 180 to 200 cakes of tallow fill the press, and the operation should be rapidly performed in order to prevent the cooling of the plates.

The separation of the oleo begins without pressure, by the simple weight of the plates, and by the heat which comes from then. When it is noticed that the running has ceased, the press should be worked, going very slowly at the commencement. The pressed tallow which remains in the cloths is used for manufacturing artificial lard and wax candles. The oleo which has run from the press is sent to margarine factories, or exported.

Oleo is a granulous mass of yellow colour, and its taste approaches that of ordinary butter. The principal market for the oleo is Rotterdam, where the Americans also send considerable quantities of this product for the needs of Europe.

The manufacture of margarine consists of mixing the oleo with some milk and a small quantity of cotton oil, the proportions varying according to the quality of the margarine to be made. Here are some of the figures :—Oleo, 16 cwt ; milk, 11 gallons ; and oil, 2 cwt. The *quantity of* oil varies greatly according to the season ; thus, in winter *when the cold is intense, 30 and even 40* per cent. of oil is used, whilst in very hot weather the addition of oil is almost suppressed. earth nuts and of sesame can also be used. The oil modifies the of the margarine, which is naturally too short and brittle, and g the oiliness of good butter.

Oleo is melted in a furnace at 113°F., and the milk and brought to the same temperature. Each of these products is en in a receptacle above the churn, which is of wood, and is fill means of funnels The materials are mixed well, until the whi the appearance of cream ; the churning lasts about two hours ; the mixture is turned into a wooden strainer, slightly inclined in to run it off into a large tub. When it leaves the strainer to fa the tub it meets a strong sheet of fresh water, which solidifi margarine.

In the tub the margarine floats on the surface of the cold water by the aid of an openwork basket, the fatty matter, which look sleet, is collected. It is turned into perforated receptacles, and drain for a longer or shorter period, according to the temper This operation generally takes about two hours. After th mechanical working of the margarine is begun. It is placed u round table, like those used in dairies, but very much larger, a mass is worked, in order to press out the buttermilk and give consistency of butter. It is next passed, in small portions at a through a horizontal worker, which is composed of two cylind wood with deep flutings, which spread out the paste and give nice appearence. It is then made into large cakes or put in tubs.

During the making of margarine, it should be noticed that i not solidify in one mass, because during the slight fermentation it undergoes before being drained it has not the peculiar taste indicates good margarine. That is why it is necessary not to u much cold water.

To give to margarine the taste of good quality butter, the fat, dropping, is sprinkled with a little special ferment mixture, comes from the artificial manufacture of the ferments of good butt

There are houses which make margarine under its right cond and there are also certain establishments which sell mixtures of and margarine for pure butter. This dishonest trade does the gr injury to pure butter and its makers, because it destroys all confi of the purchasers. Up to the present time, the detection of the pre of small quantities of margarine in butter offers great difficulties sometimes it is even impossible to discover the fraud. It has thought that it would be well to alter the appearance of margarin incorporating with it a product which would be easy of detection that the change should be obligatory. The matter proposed for u with it is phenolphtaleine, an i, accordi Mons Bruylante, margarine would then have a rosy tint if plac alkaline solutions ; the reaction persists even when 50 and 90 per of fresh butter are mixed with the margarine. This substance resists frequent cold or warm water washing. It could be remov water alkalined with caustic soda, but that practice could n followed in commerce, as the butter thus treated would have the of soap.

PRODUCTION OF QUICKSILVER IN CALIFORN

The *Engineering and Mining Journal* (New York) states that silver production in California has shown this year a considerab crease, the total receipts at San Francisco for the six months e with June having been 18,439 flasks, a gain of 4,743 flasks or 34 cent. over the first half of 1895, and of 6,033 flasks, or 48·7 per over 1894. While these receipts gauge the rate of production very they do not give the whole amount, as the reports do not includ quicksilver sold directly from the mines, nor that shipped from th the East by rail, which does not come to San Francisco at all.

The larger output seems to have been absorbed without diffi In addition to the greater demand from the California mines, ther been a growth in exports very nearly corresponding to that in the duction. The trade with China, which had been suspended for se years, has been renewed, and has aided materially in disposing o increased production.

The figures of the production of the Spanish and Austrian mine the current year have not been made public, but it is understood there has been but little change as compared with last year. The said to have been some increase from the Mexican mines, espe the Huitzuco, but this has no influence on the general market, sinc Mexican production is still considerably below the home requirem

The increase in California production has not resulted from opening of any new mines, but from the more active operation o old mines, all of which have been steadily working since the ope of the year.

THE SOAP INDUSTRY IN GREECE.

According to statistics of the Greek Soap Industry issued by Ministry of Finance at Athens, the number of soap factories in G in the year 1896 is given as 37, with an annual production of 6,50

s, and an annual export of 1,480,000 ocques of soap (*ocque* = 2·84 *voirdupois*). The value of these factories is set down at 1,825,100 nas (*drachma* = 9s. 6d.), and the number of workmen employed n are 480 men and 11 women.

MARGARINE REGULATIONS IN BELGIUM.

espatch has been received at the Foreign Office from Sir F. R. ett, Her Majesty's Minister at Brussels, enclosing copy of a r addressed to the Provincial Governors by the Acting Minister riculture which further defines the meaning of the term margarine icle I. of the Royal Decree as follows:—Any grease used for food shows a resemblance to butter in its outward characteristics, s consistency, colour, smell, and taste, of a nature calculated to e the senses and cause confusion to arise between the two articles, e offered for sale under the name of margarine, irrespective of its and composition, whether it be an animal or vegetable substance ixture of butter with any kind of oil or fat.

SHEEP DIP IN RUSSIA.

lespatch has been received at the Foreign Office from Her ty's Ambassador at St Petersburg, stating that under an Order of t 31st, 1896, Little's Patent powder dip for the treatment of and which consists of powdered sulphur with an admixture of c, is to pay duty under point 2 of section 91 of the Customs duty 5 copecks, gold, per poud, and Little's non-poisonous fluid dip under section 112, duty 1 rouble 50 copecks, gold, per poud, but on condition that the delivery out of Customs-houses and le of the above preparations shall be effected on the general basis ished for poisonous substances and against prescriptions signed by nary surgeons.

A SINGULAR CASE OF SUFFOCATION.

Saturday evening, the 24th inst, Mr. Braxton Hicks held an inquest at the Wandsworth Prison relative to the death of John m, aged 63, who was undergoing a sentence of three months' onment for loitering with intent to commit felony. Major governor of the prison, was present during the inquiry, and the witnesses were called the Coroner and the jury visited the cupied by the deceased, who died from gas poisoning contracted n during his detention in the gaol. Warder Scarlett said that on orning of the 18th inst. he found the deceased lying on his plank nconscious. He was removed to the infirmary, where he died on esday. Witness found that the ventilators had been covered up anvas bags on which the deceased had been working. Another er in the cell immediately above the deceased's was also found to ensible on the same morning. The Coroner: Was the alarm bell e cell in perfect order? Witness: Yes, sir. The Coroner ed that in all probability the deceased was rendered unconscious nly, in which case it would not have been possible for him to the bell. The witness, in answer to a question from the jury, t was usual to leave the bags in the cell. The Coroner pointed at the deceased was, no doubt, perfectly conversant with prison as he had been over 30 years in penal servitude. Dr. R F. on, the medical officer, said he saw the deceased on his admission gaol, and on account of his health put him to light labour. Oh orning in question he was called to the cell, which smelt strongly phur dioxide gas, and found the deceased unconscious. Every was made to restore him, but without avail. (Was oxygen tried? *C.T.J.*) Witness could not account for the presence of the gas e cell. The fact of the ventilators being blocked up greatly ed the man's chance of recovering himself, the gases being very . Dr. F. H. Carter, of 99, Upper Richmond-road, Putney, who a *post-mortem* examination, attributed death to suffocation due to halation of some noxious vapour. He did not think mere heat lf after a time with all the ventilators closed would generate a ent amount of carbon dioxide or carbonic oxide to produce suffo-. The cell was, in his opinion, sufficiently large to allow a man athe freely, even although the ventilators were blocked, as there d be sufficient draught from under the door. The Coroner said Prison Commissioners were fully alive to the importance of the and would continue their inquiries in order to find out what they . Mr. John Young, attached to the surveyor's department of the e Office, said he thoroughly examined the heating apparatus at the n in June last and passed it as satisfactory. He had made a r examination since this occurrence and found two defects in the ce flue, which, aided by a back draught, had allowed noxious rs to get into the adjacent cells. The fact of the ventilators in leceased's cell being closed would cause an accumulation of the rs there. William Conway, the engineer permanently engaged at rison, said he had charge of the heating apparatus, but noticed nothing unusual on Sunday. The jury returned a verdict of "Accidental death," and expressed a hope that the Prison Commissioners would further investigate the matter. The jury were, however, of opinion that the deceased aggravated the action of the fumes by blocking up the ventilators.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for month ending August, 1896, as compared with 1895:—

ALKALI.

Port.	1895.	1895.	1895.	1896.
	Cwts.	Cwts.	£	£
Russia	16,015	21,746	4,588	5,541
Sweden and Norway	18,479	9,129	3,623	1,843
Germany	9,231	13,728	2,963	3,572
Holland	14,142	7,799	3,563	1,418
France	4,735	4,403	1,843	1,568
Spain and Canaries	37,897	22,278	13,074	7,780
Italy	21,877	18,404	6,918	5,701
United States	231,422	114,091	51,834	29,666
Australasia	21,647	16,884	6,580	4,967
British North America	13,117	12,515	3,557	3,501
Other countries	90,658	82,386	26,309	24,300
Total	479,220	323,363	124,852	89,857

BLEACHING POWDER, ETC.

Port.	1895.	1896.	1895.	1896.
	Cwts.	Cwts.	£	£
United States	67,762	48,111	24,336	16,076
Other countries	43,902	32,882	15,243	11,623
Total	111,664	80,993	39,579	27,699

SUSPENSION IN THE SUGAR INDUSTRY.—The suspension of Vibrans and Gerloff, the sugar refiners of Brunswick, who are well known in all the markets, has caused a widespread commotion in the sugar industry. Up to the present the amount of their liabilities is not known. One of the principal creditors is stated to be the Land Credit Bank of Brunswick, to the amount of £25,000.

ALCOHOL IN HERB BEER.—At Royton, last week, Joseph Clegg and John Travis, Shaw, were summoned for having sold beer without a license. Mr. Banks, supervisor, of Oldham, proposed taking the case of Joseph Clegg first, and this was agreed upon. Defendant made herb beer and sold it, and it contained 4·4 per cent. proof spirit, or 2·4 per cent. more than the law allowed.—Defendant said he had to put three lots of yeast to the beer which had been tested, and that made a lot of difference. There was nothing in the beer but pure and good English herbs.—The Magistrates' Clerk (Mr. Lees): You can make spirits out of that?—Defendant: I only use sugar, herbs, and yeast.—Mr. Robbins (Somerset House analyst) said that yeast fed on sugar, and produced alcohol. Half a pound of sugar in a gallon of herb beer, as in this case, was too much. The Bench were of opinion that the defendant was ignorant of the law, and they only imposed a fine of 5s. and costs.—The case against John Travis was similar, the herb beer which he sold containing 4·8 per cent. of proof spirit. He was fined 5s and costs.

CHEMICALS *via* THE CANAL.—The following vessels have recently discharged timber, logwood, pulp, etc., in the canal:—*Fanelly* (barquentine), 197 tons of logwood and 185 tons of logwood roots from Black River, Jamaica; *Minsk* s., 968 bundles of wood pulp boards from Stettin, and 500 bales of wood pulp from Copenhagen; *Stormarn* s, 80 packages of wood pulp and 280 wood pulp boards from Hamburg; *Gyda* s., 24,000 bales of wood pulp from Sundswall; *Norrona* s, 7,435 bales of wood pulp from Gefle. The following vessels are on passage or fixed to load for Manchester, with timber, etc:—Steam: *Alverton*, 898 tons, *Gard*, 428 tons, and *Sarp*, from Gefle; *Odin*, 421 tons, from Gothenburg; *Courier*, 362 tons, from Sannesund; *Starlight*, 927 tons, and *Torbay*, 839 tons, from Drammen; *Sleipner*, 758 tons, from Kotka; *Twilight*, from Libau; and *Sicilian*, from Uleaborg—all with wood pulp and timber. Sail: *Lily*, from Jamaica, and *Linnea*, from Laguna, both with dyewoods. After discharging a thousand tons of pig iron and two hundred tons of phosphate rock in the Salford Docks, the steamer *St. Fillans* left the canal on Tuesday for Brunswick, Georgia, where she will again load for Manchester.

THE FILTRATION OF SEWAGE EFFLUENTS.

IN accordance with the proposition made in these columns some weeks back we now give the first portion of the report made by Sir H. Roscoe to the Rivers Committee of the Manchester Corporation on the filtration of the tank effluent at the Davyhulme Sewage Works. Several of the tables and diagrams do not lend themselves to reproduction, but where any have been omitted special mention is made of the fact. The report states as follows :—

I have now the pleasure of reporting to you on the filtration experiments which have been made under my supervision at the Davyhulme Sewage Works.

On the 26th March, 1895, a map of the Davyhulme Works was forwarded to me to mark thereon the position of the experimental filters which I had for some time previously suggested should be carried out by the Corporation, in order that the experience gained from such experiments with the Davyhulme effluent might be of value in deciding on the final scheme that ought to be adopted. Nothing having been done up to August, 1895, the City Surveyor requested Mr. Scudder to send in a sketch of the filters proposed, and ultimately on the 27th August I forwarded to the City Surveyor a plan showing two small filters, with all the necessary details of construction, filtering materials, etc., and on September 2nd your Committee decided that the experiments should be made. On October 3rd I had an interview with your Committee, and in my report of October 4th I again pointed out the object and the necessity of these experiments before definitely recommending a distinct course of action.

The two experimental filters were completed, and the necessary filtering materials—in one filter cinders, and in the other coke—placed in them under the direct supervision of my assistants. (A tracing of the plan forwarded to the City Surveyor on August 27th, showing the size and construction of each filter, with two sections of same, is attached to the report.) The upper stratum of each filter was composed of clean washed gravel, and the material composing the next layer to pass ⅜ inch mesh but rejected by ⅛ inch mesh was employed. It is therefore necessary to bear this deviation in mind when consulting the original plan.

On December 16th the filters were put into operation. The first effluents were, of course, discarded, as they contained very finely divided particles of coke in the case of the coke filter, and from the cinder filter gritty matter, which gave the effluents an unsightly appearance; but this very rapidly disappeared, and on December 19th the first series of experiments were commenced, and continued u ruptedly until January 4th, 1896. Both filters were worked same rate, and during the same hours, and with the same tank ef The details of working and the chemical results obtained are se in Table A, also the temperature of atmosphere and of the tank e going on to filters.

Each filter was emptied once a day, and filled once a day, and resting full the water was level with the under surface of the gra

The total volume of effluent passed through each filter from Dec 19th, 1895, to January 5th, 1896, inclusive, amounted to gallons, being at the rate of 1,593 gallons per 25 square yards hours. The chemical analyses given in Table A do not requi cussion (therefore omitted), as the working of the filters wa preliminary; but on and from January 6th, 1896, the experime seriously considered.

From January 6th each filter was filled and emptied twice and this procedure was continued until January 21st. The det working and the chemical results obtained during this period forth in Table B.

The temperature of the atmosphere and of the tank effluent go to filters is also given in this table.

The total volume of effluent passed through each filter from J 6th to January 21st, inclusive, amounted to 49,000 gallons, be the rate of 3,066 gallons per 25 square yards per 24 hours, equ to 122 gallons per square yard per 24 hours.

The percentage reduction of organic impurity as measured albuminoid ammonia, and (2) by the oxygen absorbed, four hour calculated from daily analyses tabulated in Table B, is given in C, and also in diagrammatic form in Diagram 1 (diagram om These results show that cinder filtration removed about 47 % organic impurity in the tank effluent and the coke filtration abou

From Jan. 22nd up to March 22nd the daily volume of effluent was increased. It was intended to fill each filter three times a day, several days the number of fillings was interfered with, owing working in large effluent conduit, with the result that during the from January 22nd to March 23rd only 149 fillings of each filte place instead of 156. The total volume of effluent passed throug filter during this period was 260,750 gallons, being at the rate of gallons per 25 square yards per 24 hours. The chemical resu daily analyses made during this period are set forth in Table D the average weekly results are given in Table E, also the rec time in working the filters. (Both these are omitted.)

TABLE B.—Chemical Results of Analyses of (1) Tank Effluent, (2) Cinder Filtrate, (3) Coke Filtrate.

Chemical Results expressed in Grains per Gallon.

Date	Free and Saline Ammonia			Albuminoid Ammonia			Oxygen absorbed, 4 hours' test			Nitrogen as Nitrites and Nitrates			Record of Time in Working Filters					Tem
	Tank effluent	Cinder filtrate	Coke filtrate	Tank effluent	Cinder filtrate	Coke filtrate	Tank effluent	Cinder filtrate	Coke filtrate	Tank effluent	Cinder filtrate	Coke filtrate	Filling	Resting full	Emptying	Aërating	Total	Dep Cent Al- min.
													hrs. ms.	hrs. ms.	hrs. ms.	hrs. ms.	hrs. ms.	
1896																		
January 6 ...	1·69	1·73	1·24	0·13	0·08	0·09	1·35	0·77	0·77	.....	.....	.....	1·20	2·25	1·20	21·20	26·25	2·5
,, 7 ...	2·17	1·99	2·10	0·25	0·11	0·12	1·91	0·98	1·01	.....	.....	.....	1·05	3·05	2·00	16·00	22·10	4·0
,, 8 ...	1·98	2·32	2·19	0·20	0·10	0·10	1·90	0·95	0·96	.....	.....	.....	1·35	2·55	2·00	17·30	24·00	5·0
,, 9 ..	1·93	1·86	1·84	0·21	0·15	0·14	1·77	1·04	0·97	.....	.....	.....	1·55	2·30	2·00	17·35	24·00	...
,, 10 ...	1·89	1·86	1·86	0·18	0·07	0·08	1·75	0·94	0·97	.....	.....	.....	1·05	3·40	2·00	17·15	24·00	2·0
,, 11 ...	2·30	2·20	2·29	0·15	0·08	0·08	1·60	0·97	0·95	.....	.....	.....	1·15	3·05	1·35	42·05	48·00	...
,, 12 ...	Sunday	... ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...
,, 13 ...	2·62	2·25	2·28	0·22	0·10	0·11	2·01	1·17	1·10	.....	.....	.....	1·05	3·10	1·20	18·25	24·00	5·0
,, 14 ...	0·90	1·42	1·08	0 07	0·04	0·035	1·40	0·89	0·92	.....	.....	.....	1·15	3·00	1·25	18·20	24·00	5·0
,, 15 ...	0·80	0·95	0·89	0·08	0·025	0·027	1·60	0·985	1·20	.....	.....	.....	1·30	3·05	1·25	18·00	24·00	...
,, 16 ...	1·77	1·75	1·76	0·14	0·06	0·08	1·91	0·78	0·68	.....	.... .	.....	1·00	3·15	1·20	18·25	24·00	7·0
,, 17 ...	1·65	1·83	1·72	0·14	0·07	0·10	1·78	0·87	0·86	.....	.....	.....	1·20	3·00	1·30	18·10	24·00	10·0
,, 18 ...	2·86	2·46	2·41	0·33	0·22	0·22	2·59	1·45	1·78	.....	.....	.....	1·30	2·45	1·45	42·00	48·00	9·0
,, 19 ...	Sunday	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	... ..	.....	...
,, 20 ...	1·55	1·79	1·78	0·24	0·17	0·17	1·00	0·59	0·58	0·053	0·028	0·033	1·10	3·00	1·45	18·05	24·00	0·5
,, 21 ...	1·93	1·73	2·01	0·35	0·12	0·18	1·96	0·99	1·04	0·024	0·043	0·028	2·00	2·00	2·00	17·00	23·00	...
Average	1·73	1·78	1·71	0·178	0·09	0·10	1·72	0·95	1·00	.....	.....	.....	19·05	40·55	23·25	300·10	383·35	

Average percentage reduction due to Filtration.

	Cinder	Coke
Albuminoid Ammonia	49·4	43·8
Oxygen absorbed	44·7	41·8

	Hours Mins.		Percentage
Filling	19·05	=	5·8
Resting full	40·55	=	18·8
Emptying	23·25	=	10·8
Aërating	300·10	=	61·6
	383·35		100·0

Volume of effluent passed through each Filter from January 6th to 21st inclusive, 16 days, 49,000 gallons.

$$\frac{49{,}000 \times 24}{383{\cdot}5} = 3{,}066 \text{ gallons per 25 square yards} = 122 \text{ gallons per square yard per 24 hours.}$$

TABLE C.—Percentage Reduction of Organic Impurity as measured (1) by the Albuminoid Ammonia, (2) the Oxygen absorbed, 4 hours' test, calculated from daily results (see Table B, January 6th to January 21st, 1896).

Impurity of Tank Effluent—100.

Date.	Albuminoid Ammonia.		Oxygen Absorbed.	
	Cinder Filtrate.	Coke Filtrate.	Cinder Filtrate.	Coke Filtrate.
1896				
January 6th	38·4	30·7	43·0	43·0
,, 7th	56·0	52·0	48·7	47·1
,, 8th	50·0	50·0	50·0	40·9
,, 9th	28·6	33·3	41·2	45·2
,, 10th	61·1	55·5	46·3	44·5
,, 11th	46·6	46·6	39·3	40·6
,, 12th	—	—	—	—
,, 13th	54·5	50·0	41·7	45·2
,, 14th	44·4	52·7	40·0	33·3
,, 15th	65·0	62·5	38·6	24·9
,, 16th	57·1	42·8	59·1	64·4
,, 17th	50·0	28·5	51·1	51·6
,, 18th	33·3	33·3	44·0	31·2
,, 19th	—	—	—	—
,, 20th	29·2	29·2	41·0	42·0
,, 21st	65·7	48·5	49·5	46·9
Average of 14 analyses	49·4	43·8	44·7	41·8

The percentage reduction of organic impurity, as measured by the albuminoid ammonia and the oxygen absorbed test, calculated from weekly average analyses, is given in Table F, and in diagrammatic form in Diagram 2 (diagram omitted).

TABLE F.—Percentage Reduction of Organic Impurity as measured (1) by the Albuminoid Ammonia, (2) the Oxygen absorbed, four hours' test, calculated from average weekly analyses (see Table E, January 22nd to March 22nd, 1896).

Impurity of Tank Effluent—100.

Date. Week ending	Albuminoid Ammonia.		Oxygen absorbed, 4 hours'	
	Cinder Effluent.	Coke Effluent.	Cinder Effluent.	Coke Effluent.
1896				
January 26th	41·7	41·1	53·4	50·4
February 2nd	41·4	40·6	51·5	46·0
,, 9th	40·6	40·6	53·1	44·8
,, 16th	45·2	44·6	50·4	41·6
,, 23rd	46·8	47·4	57·7	50·2
March 1st	52·8	48·5	59·8	51·2
,, 8th	76·2	68·8	64·9	58·2
,, 15th	83·5	77·7	62·6	56·4
,, 22nd	63·8	61·2	59·5	45·8
Average	54·6	52·3	57·0	49·4

A Table G (omitted) was also appended, showing temperature of atmosphere (maximum and minimum); also average temperature of tank effluent from the filters, from Janaary 22nd to March 22nd; also the daily rainfall.

The chemical results during this period of working show that cinder filtration removed on an average about 56 % of the organic impurity in the tank effluent, and the coke filtration about 51 %. The total quantity of effluent passed by each filter may be summarised as follows:—

Period of working, 1895-96.	Number of days working.	Volume of tank effluent filtered in gallons.	Gallons per square yard per 24 hours	Equivalent to gallons per acre per 24 hours.
Dec 19th to Jan. 5th	17	28,000	64	309,760
Jan. 6th to Jan. 21st	16	49,000	122	590,480
Jan. 22nd to March 22nd	61	260,750	171	827,640

In order that the chemical results obtained during the period of 61 days' working (January 22nd to March 22nd) may be discussed with a view of testing the efficiency of the filtration Diagram 3 (omitted) has been prepared, setting forth the weekly averages of the chemical results.

From this diagram it is seen that of nine weekly averages the albuminoid ammonia is in six cases above a limit of impurity which it is desirable should not be exceeded, and in three cases below the limit of impurity as regards both cinder and coke filtration.

From the oxygen absorbed, four hours' test, it is observed that in only one case is the weekly average above the limit of impurity with cinder filtration, the other eight weekly averages being below the limit. The coke filtration shows four weekly averages slightly above the limit—one decidedly above it—and four below.

From the oxygen absorbed, three minutes' test—a test that measures organic matter easy to oxidise—it is observed that of seven weekly averages five are below the limit and two are above the limit.

The cinder filter gave a slightly superior result to that of the coke filter, as is shown in the diagram, where the average result over the 61 days' working is given; but if we compare the weekly results, as has been done, the marked superiority of the cinder over that of the coke is apparent.

The chemical results further show that generally the amount of free and saline ammonias in the filtered effluents of both filters is slightly higher than that of the tank effluent, and the nitrogen existing as nitrites and nitrates in the tank effluent is to some extent *deoxidised*. This is shown by the average of 51 analyses made between January 22nd and March 22nd, 1896, the results being as follows:—

	Free and Saline Ammonia Grains per Gallon.
Tank effluent ...	1·854
Cinder filtrate	1·962
Coke filtrate ...	1·957
	Nitrogen as Nitrites and Nitrates.
Tank effluent ...	0·109
Cinder filtrate	0·061
Coke filtrate ...	0·069

The increase of free and saline ammonia is evidence that a portion at least of the nitrogenous organic matter is passing through the state of ammonia, and that a certain amount of carbon has been oxidised from the organic condition to carbonic acid. Indeed the oxygen absorbed test indicates a large oxidation of organic carbon, and that active changes or transformation of organic matter were going on in the filters.

TABLE I.—Analyses of Average Samples of Raw Sewage from Manchester Sewage Works, Davyhulme, taken from 6 p.m. to 6 p.m. each date.

Results expressed in grains per gallon.

Date.	Ammonia.		Oxygen Absorbed.		Nitrogen as Nitrites and Nitrates.
	Free.	Albuminoid.	4 hours' Test.	3 mins. Test.	
1896					
Feb. 24th & 25th	2·36	0·50	5·93	1·39	0·023
,, 26th & 27th	2·18	0·70	5·88	1·21	0·037
March 1st & 2nd	1·38	0·28	2·91	0·65	0·127
,, 3rd & 4th	1·35	0·25	3·44	0·82	0·228
,, 10th & 11th	1·35	0·45	4·27	1·17	0·087
Average ...	1·72	0·43	4·48	1·05	0·100

The total purification effected may be on the whole considered satisfactory (see Raw Sewage Table I), yet it must be borne in mind that the true aim of purification is the conversion of the nitrogenous organic matter into inorganic nitrogen (nitrites and nitrates), and whilst this has not yet been attained in these filters, I believe that if the experiments had been continued for a further length of time this object might have been attained. Indeed, the main object and necessity of these experiments was to ascertain whether or not the organic nitrogen could be oxidised to inorganic nitrogen, or at least to what extent. Possibly it might have been found advisable to modify the method of working the filters to attain the object, but I can here only report on what has been done during the limited time the filters have been at my disposal. (*To be continued.*)

UNPURIFIED GAS.—On Thursday the inhabitants of Stalybridge were much concerned on account of a most disagreeable smell of sulphur which pervaded the atmosphere throughout the town for short periods, and numerous operatives were carried from workrooms in a stupefied condition. It appears that the purifying apparatus at the Corporation gasworks having taken fire gas was sent out unpurified. Hence the temporary pollution of the atmosphere.

LEATHER DYEING.—On Thursday, this week, the Leather Dyeing Department of the Worshipful Company of Leathersellers' Tanning School, at Herold's Institute (a branch of the Borough Polytechnic Institute), was formally opened. The chair was taken by A. Lafone, Esq., M.P., who was supported by the Master and Court of the Company. The Herold's Institute is situated at the Jamaica-road end of Drummond-road, Bermondsey. It is within a few minutes' walk of Spa-road Station, and trams from Tooley-street pass close to it. The laboratories were open for inspection both before and after the meeting.

Trade Notes.

SOCIETY OF CHEMICAL INDUSTRY: *Manchester Section.*—The opening meeting of the Session will take place on Friday, November 6th, at 7 p m, in the rooms of the Chemical Club, Victoria Hotel, when the Chairman will deliver his annual address.

ANOTHER COAL TRADE COMBINATION.—It is reported that a powerful coal trust combination is about to be formed in the West of Scotland, the amalgamation embracing six of the largest producers of fuel in the district. The capital will be £2,000,000.

SOCIETY OF CHEMICAL INDUSTRY: *Liverpool Section* —The first meeting of this Section for the Session 1896-7 will be held on Wednesday, November 4th, 1896, in the Theatre of the Chemical Laboratories, University College, when the Chairman will deliver his opening address on "The Synthesis of Physiologically Active Organic Compounds." Tea and coffee in the Museum from 7 to 7.30 p.m.; the business of the meeting will commence at 7.30.

SOCIETY OF CHEMICAL INDUSTRY: *London Section.* The first meeting of the Session will be held at the rooms of the Chemical Society, Burlington House, on Monday, November 2nd, 1896, at 8 p.m., when the following papers will be read:—(1) "The Production of Inoculating Materials for Use in Agriculture (Nitragin)," by Dr. J. A Voelcker, F.I C., F.C.S; (2) "The Smelting and Refining of Cyanide Bullion," by Arthur Caldecott, F I.C., F.C.S.

THE CO-ORDINATION OF TECHNICAL INSTRUCTION.—At the recent annual distribution of the prizes gained by students at the Hindley Technical Classes, Professor T. H. Core, of Owens College, referred at length to the efforts Manchester was putting forth as regards technical instruction. The Owens College authorities, who 15 or 20 years ago, were the pioneers of evening classes in the city, had been content, the Professor said, to submit to a reduction in income, probably varying from 5 to 10 per cent., in order that the good of the community might be served by the Manchester Grammar School, the School Board, and the College each taking its distinct portion of the work, and thus preventing overlapping. He should like to see some similar system devised whereby all the technical institutions and similar educational establishments in Lancashire, or even in the North of England, should be brought into co-operation with Owens College and University College, Liverpool, and by which deserving students could pass from the public elementary schools and technical institutes to the highest rungs of the educational ladder. There was no reason why this should not be so, and such a system would be productive of good not only to Lancashire but also to the country at large, in enabling the artisans to better meet foreign competition and to develop their faculties, which last was the highest end and aim of education.

INHALING NOXIOUS FUMES - An adjourned inquest was held on Wednesday, at Droylsden, by Mr. J. F. Price, the County Coroner, concerning the death of Isaac Bailey, aged 41 years, employed as a labourer by the Clayton Aniline Company. On the 22nd inst. the deceased went to his employment in his usual health, but returned home during the afternoon, and complained that the gas at the works had affected his lungs As he was breathing very badly a doctor was called in, but the deceased gradually got worse and died late the same night. John Minch, a labourer, who worked with the deceased on the day in question, said they were employed at the nitric acid plant, and shortly after dinner the deceased complained of pains in his stomach, and could not get his breath well. He got worse during the afternoon and then went home. He did not complain of inhaling the nitric acid fumes. The nitric acid was contained in earthenware jars, and no fumes arose except when drawing off. They had not drawn any off that day. None of the acid ever escaped, and none of it was contained in open vessels He had never felt any effects from inhaling the acid fumes. He was not aware of any way in which the deceased could have inhaled the fumes The fumes could only arise when drawing the jars. Dr. Houston, who was called to the deceased shortly before the man's death, said the symptoms resembled capillary bronchitis and pneumonia, and were consistent with poisoning by nitric acid fumes. John Parrish, an assistant to the manager of the Clayton Aniline Company, said the duty of the deceased on the 21st inst. was to tar the iron work connected with the new nitric acid plant at the works. All the receivers were empty that day, and it would be impossible for there to be any fumes The work was continued on the following day, when the deceased would have to examine the joints of the plant, and make up any leakages. Air would be drawn in at the leakages as the plant worked under a vacuum, and no fumes could possibly escape.—Since the adjourned inquest, Dr. Houston had made a *post-mortem* examination, as the result of which he was of opinion that death was due to asphyxia produced by some violent irritant to the trachea and bronchial tubes. The symptoms were such as would probably be produced by inhaling nitric acid fumes.—The jury returned a verdict of "Accidental death." Mr J H. Rogers, the District Inspector of *Factories, was in attendance.*

THE SWANSEA TINPLATE TRADE.—The steel and tinplate o tives employed throughout the Swansea, Llanelly, and South W districts have served notices upon the employers to terminate cont on Saturday (31st inst), unless an advance in wages is granted ra the wage rate to the standard of 1874 Upwards of 240 mills wi stopped, and a strike will affect 12,000 men.

THE CHESHIRE SALT TRADE —The depression in the Che salt trade has assumed a most serious aspect, and on Saturday mor last at least half the pans in Winsford, the centre of the industry, idle Salt boilers are only working two or three days a week average weekly wage being 12s. Much suffering prevails. per cent. of the watermen are out of employment, and it has found almost impossible to get Liverpool ships to take salt cargoes

Obituary.—We regret to notice the somewhat sudden deat *Mr. William Daniel Allen*, chairman of the firm of Sir H Bessemer and Co., Sheffield. Mr. Allen was chiefly notable fo association with Sir Henry Bessemer during the whole of the whea the latter was experimenting with the celebrated Bessemer cess of steel manufacture. When quite a young man Mr Allen j Sir Henry, then Mr. Bessemer, and throughout the many years, d which the latter was perfecting the process which bears his name, Allen was his right-hand man. The process was first put into oper in a commercial form at the Bessemer Works in Sheffield, under management and control of Mr. Allen, Sir Henry Bessemer being of the partners in the firm. The partnership expired in 1877, the concern was turned into a limited company, of which Mr. was chairman up to the time of his death. In 1890 the Iron and Institute conferred upon him the Bessemer medal for effecting impr ments in the Bessemer process. Mr. Allen was also the invent the Allen agitator for the better mixing of steel. He was 72 of age.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Efforts are being made to depreciate benzols, but stocks are s so that prices remain at 4s 6d. for 90's; in the case of 50 90's, ever, there is a decline of 1½d., to 3s 1½d. There is nothing to report about crude carbolic acid, with the exception of 40% cry which are now quoted 6¾d. Crude naphtha stands at 1s. 3d., solvent is steady at 1s. 6d. Pitch is a little better, but there change in price.

Sulphate of ammonia is a little firmer, the demand having impr somewhat with the close of the month. Nearest prices for prompt London outside makes £7 5s., Liverpool £7. 3s. 9d, Hull £7 2s and Leith £7. Beckton price for January-June is £7. 10s.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is practically no change in the situa so far as the principal products are concerned. Values remain ste both for prompt and forward delivery, in regard to caustic soda, w on the whole is a turn easier for prompt delivery, and for which quotations are as follows - f.o b. Liverpool, 77%, £9 : 74%, £ 70%, £7. 5s ; 60%, £6 5s per ton, nett, 10-ton lots and upwa Bleaching powder in better inquiry, both for home trade and exp and prices firm at £6. 10s. to £6. 12s 6d per ton, f o.r , for softw casks, and £6 12s 6d. to £6. 15s , hardwoods, f.o.b. Liverp Chlorates unaltered - soda 5d., potash 4d per lb. Soda crystals qu Recovered sulphur firm at £4. 12s 6d. to £4. 15s , f.o.r. mak works. Ammonia alkali, 58%, bags, £3 7s. 6d., f.o.r., and the st price is quoted for forward delivery, but only little business do Sulphate of copper rather firmer at £16. 5s. to £16 f o b. Demand continues good for potash, caustic carbonate, which are without change in value, either prompt or forward delivery. Acetate of lime, brown, somew dearer at £4. 5s to £4. 7s. 6d, Manchester district: grey acetate there is no demand. White sugar of l nominally unchanged, and very little business doing. Acetat soda £14., c.i.f. For white powdered arsenic the demand is good, and supply short, the price being firm, at £21, 15s. to £ Garston, London, etc. Nitrate of soda steady to firm, at 7s. 10½d 8s. per cwt. Yellow prussiate of potash, 5¾d. per lb. So 4¾d. to 5d. per lb. Cyanide, 98/100%, 1s. per lb. Superphosph in better request, as usual at this time of the year. Ammonia s have, generally, a lower tendency. Green copperas continues sca and prices are firm at all points In miscellaneous chemicals ther very little movement. Trade on the whole is quiet, and values do yet show any improvement.

REPORT ON MANURE MATERIAL.

ere has been more inquiry and greater disposition to operate than been for some time, and values of phosphatic material tend to 'n as the effect of advance in freights makes itself appreciated. position of high grade phosphate is very firm, prospective scarcity g to be faced in addition to higher freights. The quotation for 5% Florida is still 6¼d per unit c i f. good U.K. ports 1897 ier shipment; but there would not probably be large sellers, there extensive buyers in the market for the Continent and Baltic. For Carolina and Algerian 58/63% grade the quotation is 5¼d. per 1897 summer shipment; but for early shipment considerably would have to be paid. There is good inquiry for River Plate s, and £3. 15s. per ton is nearest value. Sales of Bombay bone for shipment are reported, and higher prices are now asked; £4. 3 probably have to be paid for fine crushed Kurrachee bones. te of soda is steady at 8s. per cwt. for fine quality on spot. There re inquiry for miscellaneous nitrogenous material, but no special ess is reported.

THE METAL MARKETS.

NDON, WEDNESDAY.—Pig iron quiet: Scotch warrants closed 3s 3d, Middlesbrough 39s. 11½d., cash, and hematite 40s. er quiet: Chili bars, G. O. B.'s and G. M. B's., closed at 2s. 6d to £48 7s. 6d. cash, and £48. 12s. 6d. to £48. 17s. 6d. months. Tin steady: Straits closed at £57. 17s. 6d. to 7s. 6d. cash, and £58. 12s. 6d. to £59. 2s. 6d. three months; alian, £59. 15s.; English ingots, £62 to £62. 5s. Lead: ish, £11 5s. to £11. 6s 3d.; English, £11. 10s Silesian er, ordinary, £17. Nickel 1s. 2½d. Antimony £28. 10s. to £29. ksilver: First hands, £6 12s. 6d.; second hands, £6. 11s. 6d. *er shares* steady: Cape, 2⅜ to 2½; Copiapo, 2 1/16 to 2 2/16; la, 1 14/16 to 2 1/16; Mason and Barry, 2⅞ to 3⅛; Rio Tinto, 24 9/16 11/16; Tharsis, 5⅜ to 5⅞.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

LS.—Palm oil is quiet, and the price easier. Sales of Lagos been reported at £22 10s. per ton Olive is steady. There has a small business passing, including Seville, at £29 per tun. ed is the turn easier, Liverpool makes now standing at 17s. 9d. s. 6d. per cwt, in export casks Cottonseed has fallen again, Liverpool refined is now quoted 16s. 9d to 17s. 3d. per cwt., but rican is, so far, unaltered at 18s. per cwt. Castor oil is scarce, on the advance, good seconds Calcutta being held for 3¼d. b., as is also first pressure French and Madras. Tallow is quiet, there is nothing fresh to report. Resin is scarce and proportely firm, but business is restricted Spirits of turpentine are y at 21s 9d., this now being the highest quotation. Petroleum ady: American 6⅜d. to 7¼d, and Russian refined 5¼d. to 5⅞d. allon.

TYNE CHEMICAL REPORT.

TUESDAY.

emicals still continue dull, with only a moderate inquiry. Soda als, £2. 2s 6d. per ton, gross weight locally. Caustic soda, 7%, £9. 5s. per ton; 70%, £7. 10s. per ton. Sulphur scarce, 4. 15s. per ton. Other products unaltered.

eaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton ; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. on, nett: recovered sulphur, 2 cwt. bags, £4. 15s. per ton, nett; ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%. £4. 5s. per ton, ; do., 52%, £4. 7s. 6d. per ton, nett: alkali, 36%, £3. 7s 6d per nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite ia, 5-7 cwt. casks, £6. 5s. per ton, nett; do.. 1 cwt. kegs, £7. ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; 100° Tw., £3. per ton, nett; do., 140° Tw., £3 7s. 6d. ton, nett: soda crystals, casks, £2. 2s. 6d. per ton, weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; rate of potash, 5d. per lb., less 6%; pearl hardening, per ton, nett; pure white sulphate of alumina, £3 17s. 6d. on, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, ed crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; onate of alumina, £30. per ton, nett; aluminate of soda, £30. on, nett.

ALT is fairly steady at 9s. to 9s 6d. per ton, f.o.b Tees.

OALS.—The market is quiet, though the coke trade shows a ded improvement. Bunker coals are also stronger. To-day's ations are:—Best Northumbrian steam, 8s. to 8s. 3d. per ton; second qualities, 7s. to 7s. 3d. per ton. Gas coals, 6s. 9d. to 7s. per ton. Small steam, 3s. d. to 3s 6d per ton. Household coals, 10s. to 11s. per ton. Coke firm at 14s. to 15s. per ton.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Sulphate of ammonia was on report on Friday last as having been done once at £6. 17s f d., spot, Leith, and if that was the case the feeling by this time has improved a shade. It cannot be obtained to-day readily for less than £7., though one or two makers might look at £6. 18s. 9d. Forward dealing has been more discussed than for some time back, and £7 7s. 6d. to £7. 10s. for spring delivery could be obtained, but makers have no heart, as yet, to pledge themselves ahead at figures so low. The general market for chemicals is, if anything, quieter, except perhaps in the case of sulphur, which, owing to scarcity, quotes higher at £4 15s. to £5., and refined alkali, which also is dearer The others all very quiet, but old prices maintained. The only fresh feature in the mineral oil and paraffin section is the further advance of lubricants following the American quotations, gone up on account of the higher freights at present exacted. The other lines are as before.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 5s, 60/62° £6. 5s., and cream 60/62° £6., all nett, Liverpool; bleaching powder, £6. 12s. 6d. nett, Tyne; saltcake, 19s.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d, and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4¼d. less 5%, any port; nitrate of soda, 7s. 10½ d. to 8s.; sulphate of ammonia, £6 18s. 9d. to £7. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. to £16. 5s. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¾d., and soft. 1½d. to 1⅞d. per lb.; paraffin wax, 120° semi-refined, 1 13/16d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s. 885° £5. 15s. to £6. 5s., and 890 895° £6. 10s. to £7. Week's imports of sugar at Greenock were 11,976 baskets cane and 15,000 bags beet unrefined.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The report of the Seed Crushers' Committee of the Hull Chamber of Commerce states that the general condition of the seed-crushing trade during the past twelve months has been most disappointing, for rarely even during the period of activity, when the mills have been in full operation, has there been a profitable margin during the year. Egyptian cottonseed has come up poor in quality, with a curtailed yield of oil, and the persistent fall in cotton oil—attributable to the home trade—having considerably decreased, has been, perhaps, the greatest block on the year's operations. Linseed has touched the lowest point known, but along with it, linseed oil collapsed to such an extent that small advantage could be taken of the position. There has, however, come a change over the scene, and owing to advance in grain, coupled with higher freights, and reported shortage of the crop in India, the market has taken a turn, and is now tending upwards; but, unfortunately, the prices of both cakes and oil have fallen more rapidly than the price of seed, thus, in spite of low prices, leaving the margin unprofitable. Linseed oil during the week, after advancing about £1. per ton to 16s. 6d. naked spot, has turned flat again, and to-day 16s has been accepted. November December is quoted 16s. 3d.; January-April offer at 16s 9d, and May August quoted 17s. 3d. Boiled and refined, £1. to £2 per ton extra. Export for the week has been 3,180 cwts. Refined cotton rather firmer: spot steady, at 15s. to 15s 1½d. naked; November-April, 15s. 4½d.; casks £1., and ordinary barrels 30s. per ton extra. Export for the week has been 6,860 cwts Olive oil unchanged. Green olive oil soap, 60%, £16. per ton c.i.f. Hull Bone grease very scarce, at 17s. 3d. per cwt. Cod oil, £16 to £18. per ton. Belgian oleines unchanged. Yorkshire brown grease, £8. per ton

CAKES.—Linseed cakes steady; 95% pure, £6. 7s 6d.; oil-cakes, £5. 7s 6d.; Russians and Americans *nil* on the spot, to arrive prices prohibitive Cotton cakes firm at the advance, with, however, few buyers at it: best makes, £4. 5s. to £4. 7s. 6d. Rape cakes unaltered.

PAINTS.—The situation and prices unchanged.

New Companies.

Yorkshire Petroleum Oil Co., Ltd.—CAPITAL £2,000., in shares of £1. This company has been formed to manufacture, sell, and deal in petroleum and other oils, tallow, wax, stearine, etc. Registered office, 1, St. James'-street, Leeds.

Cowper-Coles Zinc Extraction Syndicate, Ltd.—CAPITAL, £3,000., in shares of £1. each. This company has been formed to turn into account the benefit of certain existing inventions relating to the production and extraction of zinc. The registered office is Mellanear, Hayle, Cornwall.

Hamlyn Brothers, Ltd.—CAPITAL, £200,000, in £10. shares, of which 6,000 are 5 % cum.-preference. This company has been formed to take over the business of woolstaplers, curriers, fellmongers, manure manufacturers, etc., carried on at Buckfastleigh, Devon. The subscribers to the memorandum of association are :—J. Furneaux, Hill Crest, Buckfastleigh, retired; James Hamlyn, Bossell, Buckfastleigh, manufacturer; John Hamlyn, Fullaford, Buckfastleigh, retired; Joseph Hamlyn, Bilberry Hill, Buckfastleigh, manufacturer; W. Hamlyn, Hapstead, Buckfastleigh, tanner; T. Hamlyn, Cleavehurst, Buckfastleigh, tanner; J. G. Hamlyn, The Close, Barnstaple, merchant.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 17th.

Acetate of Lime—
U. States, 1,113 bgs. H. Wallace & Co
,, 1,998 R. E. Drummond

Acetic Acid—
Hobart, 20 pks. H. Wallace & Co.
Holland, 20 cks. ,,
,, 3 cs. A. & M. Zimmermann
,, 100 R. W. Greeff & Co.

Acetone—
Austria, 15 drs. Thames S. T. & L. Co.

Albumen—
France, £18 Mory & Co

Alkali—
France, 90 c. J. Barber & Co.

Alum—
Holland, 142 cks. Ohlenschlager Brs

Arsenic—
Melbourne, 80 brls. G. H. Adams & Co.

Asbestos—
Adelaide, £12 Leach & Co.
Germany, 103 Craven & Co.
,, 5 T. H. Lee
Canada, 160 W. Byford

Barytes—
Belgium, 107 cks. J. L. Lyon & Co.
Holland, 57 ,,
,, 42 E. J. Diggins
,, 18 R. W. Greeff & Co.
,, 18 J. Graves
Germany, 46 W. Harrison & Co.
Belgium, 35 Fleming's Oil & Chemical Co.
,, 35 brls. W. Harrison & Co.
Holland, 44 Taylor Brs.
,, 270 pks. W. Harrison & Co.

Bleaching Powder—
Holland, 400 c. J. M. Steel & Co.

Bleaching Soda—
Germany, 100 cs. H. Lambert

Bone Meal—
E. Indies, 255 t. A Hunter & Co.

Bromide—
Germany, 5 cks. A. & M. Zimmermann

Bromine—
Germany, 125 cs. A. & M. Zimmermann

Caoutchouc—
Germany, 56 c. L. & I. D. Jt. Co.
France, 5 H. Johnson & Sons
Zanzibar, 58 L. & I. D. Jt. Co.
,, 15 Clarke & Smith
,, 3 S. Figgis & Co.
E. Indies, 16 Forbes, Forbes & Co
Madagascar, 52 Procter Brs.

Carbolic Acid—
Germany, 17 pks. J. G. Back

Castor Oil—
Japan, 12 cs. L. & I. D. Jt. Co.
France, 2 ,,
Italy, 40 Stebbing & Co.
France, 53 brls. J. Greig
E. Indies, 140 cks. H. J. Perlbach & Co.

Caustic Potash—
France, 110 c. J. A. Reid
Germany, 20 J. M. Steel & Co.

Chemicals (otherwise undescribed)
Holland, £62 J. Barber & Co.
,, 73 T. H. Lee
U. States, 215 W. H. Smith
,, 987 E. C. Bailes
Belgium, 272 Société John Cockerill
Holland, 304 B. & F. Wf. Co.
Germany, 188 T. H. Lee
,, 891 A. & M. Zimmermann
Holland, 14 Little & Johnston
,, 3 J. L. Lyon & Co.
,, 16 H. Lorenz
France, 144 Mory & Co.
Germany, 45 F. W. Berk & Co.
,, 8 W. Harrison & Co.
,, 33 City Coml. Wf.
U. States, 50 Lunham & Moore
,, 2,750 L. & I. D. Jt Co.
Germany, 130 ,,
,, 60 A. Carey

Cream of Tartar—
France, 2 cks. McNamara & Co.
Italy, 8 Thames S. Tug & L. Co., Ld
Belgium, 5 R. W. Greeff & Co.
France, 10 brls. B. & F. Wf. Co.
,, 4 C. Atkins & Nisbet
Italy, 20 Howard & Sons
Holland, 25 kgs. Kirkpatrick & Co

Dyestuffs—
Aniline
Holland, 6 pks. L. C. & D. Rly.
Anthracene
Holland, 95 cks. Burt, Boulton & Co.
Argols
Italy, 20 cks. 15 cs. Thames S. T. & L. Co.
France, 49 bgs. B. & F. Wf. Co.
Cochineal
Canaries, 12 bgs. W. M. Smith & Sons
,, 3 J. W. Borland
,, 53 Sperling & Williams
,, 5 Kuhner, Henderson, & Co.
Cutch
Belgium, 125 cs. J. Harrison
E. Indies, 50 bxs. J. Swire & Sons
Ceylon, 140 Ross & Deering
Singapore, 100 Marshall & French
,, 800 Williams, Torrey, & Co.
Divi Divi
E. Indies, 22 bgs. Walker, Munsie, & Co
Extracts
France, 20 cks. B. & F. Wf Co
,, 9 J. Harrison
Germany, 220 bgs. A. J. Humphrey
Fustic
B.W.I., 2 t. E. D. & F. Man
,, 3 Park, Macfadyen, & Co.
Gambier
Singapore, 261 bls. J. Swire & Sons
Japan, 223 L. & I. D. Jt. Co.
Holland, 203 Beresford & Co.
Indigo
E. Indies, 49 chts. L. & I. D. Jt. Co.
,, 24 Eales, Prince, & Co.
,, 92 Binny & Co.
,, 6 Arbuthnot, Latham, & Co.
,, 30 Forbes, Forbes, & Co.
Egypt, 5 L. & I. D. Jt. Co.
Logwood
B.W.I., 44 t. Benekendorff & Co.
,, 39 Anderson, Anderson, & Co.
,, 24 S. Dobree & Sons
,, 11 E. D. & F. Man
Madder
Holland, 1 ck. J. Barber & Co.
Myrabolams
E. Indies, 1,000 pkts. P. & O. Co.
Shumac
Italy, 100 bgs. E. & A. Cummins
,, 500 Harris Brs.
,, 360 McDougall & Bonthron
,, 45 L. & N.-W. Rly.
Tanners' Bark
Adelaide, 6 t. Beresford & Co.
Natal, 10 A. & W. Nesbitt

Farina—
Holland, 50 bgs. J. Barber & Co.
,, 200 R. Bennett & Co.
,, 100 G. Hornzee

Glucose—
U. States, 250 pks. 250 c. Union L. Co.
,, 477 477 H. K. Daniels
,, 120 500 L. Norman & Co, Ltd.
France, 200 200 ,,
U. States, 500 500 Robinson, Son, & Co.
,, 250 440 Bellamy & Co.
,, 5,166 5,166 Pearce, Pelly, & Co.

Glue—
Austria, £190 M. H. Voss
Germany, 30 Craven & Co.
Belgium, 200 J. Barber & Co.
France, 105 E. Fischel & Co.
Italy, 25 City Coml. Wf.
Holland, 6 G. Rahn & Co.
Italy, 30 J. Harrison
Holland, 20 Carey & Sons
,, 15 H. Johnson & Sons
Germany, 187 L. & I. D. Jt. Co.
,, 85 Andorsen, Becker, & Co.
France, 322 Burnett Brs. & Sons
Italy, 75 Prop. Bull Wf.
France, 36 Mory & Co.
,, 7 J. Harrison

Lead Acetate—
Germany, 4 cks. J. Barber & Co.

Lithopone—
Holland, 20 cks. D. Storer & Sons

Manganese—
Hong Kong, 25 t. J. Swire & Sons
Japan, 25 F. Haebeilin

Manure—
Brisbane, 100 t. L. & I. D. Jt. Co.
E. Indies, 50 Fox, Roy, & Co.
,, 590 A. Hunter & Co.

Methyl Alcohol—
Germany, 9 dms. Tingle, Jacobs, & Co.

Mica—
Germany, £180 E. Freuna
E. Indies, 35 Arbuthnot, Latham, & Co.
Ceylon, 170 E. Davis & Co.
E. Indies, 240 ,,
U. States, 135 C. Ward
E. Indies, 700 W. M. Smith & Sons
U. States, 40 Carter, Paterson, & Co.

Minium—
Holland, 10 cks. J. Barber & Co.

Naphtha—
Holland, 55 dms. Burt, Boulton, & Co.

Naphthaline—
Germany, 13 cks. Fleming's Oil & Chemical Co.

Ochre—
Holland, 22 pks. Phillipps & Graves
France, 60 cks. T. Cartwright

Phosphate Rock—
Belgium, 160 t. Hine Brs. & Co.
France, 340 A. Hunter & Co.
,, 295 Anglo-Contl. G. Wks.
Belgium, 250 Lawes Chemi. M. Co

Pitch—
Holland, 1 brl. Abbey, Abbey, & Co.
N. Russia, 700 Fellows, Morton, & Co.
Holland, 2 A. G. Robinson Roberts & Co.
N. Russia, 1,130 Linck, Moeller, & Co.

Plumbago—
Germany, 19 cks. O. Schubig
,, 57 E. Galloway
U. States, 10 Beresford & Co.

Potassium Carbonate—
France, 200 c. Charles & Fox
Germany, 504 W. G. Blagden
France, 65 J. A. Reid
,, 160 Petri Brs.
Germany, 10 ,,

Potassium Oxymuriate—
Germany, 4 cks. G. Boor & Co
Sweden, 20 kgs. ,,

Pyrites—
Spain, 2,169 c. C. Tennant, Son, & Co.

Rosin—
U. States, 1,000 brls. F. & S. Chiesman & Co.

Saltpetre—
Germany, 44 cks. L. & I. D. Jt. Co.
,, 50 P. Hecker & Co.
E. Indies, 331 bgs. Lucas & Spencer's Wf.

Soda—
Holland, 100 c. R. W. Greeff & Co.

Soda Ash—
Belgium, 680 c. R. Waters

Sodium—
Germany, 4 cks. F Boden

Sodium Acetate—
France, 26 cks. J. Harrison

Sodium Hyposulphite—
Germany, 200 c. Petri Brs.

Starch—
Belgium, 184 cs. F. Clayden & Co.
Germany, 770 Horne & Co.
Holland, 240 Phillipps & Graves
,, 302 E. & T. Fitch
Belgium, 890 ,,
,, 72 A. B. Curtis & Co.
Holland, 150 J. Barber & Co.
,, 91 Little & Johnston
U. States, 480 bgs. Ohlenschlager Brs.
Belgium, 330 cs. T. H. Lee
Holland, 52 Herne, Peron, & Co.
,, 10 bgs. ,,

Stearine—
Belgium, 76 bgs. 1 ck. C. S. Lovell
France, 256 H. Hill & Son
Belgium, 8 pks. Schenker & Co.
France, 80 bgs. H. Wallworn & Tomei

Sulphur—
Spain, 50 t. A. J. Boyé

Tar—
N. Russia, 7,786 brls. Linck, Moeller, & Co.
,, 150 W. F. Malcolm & Co.

Tartaric Acid—
Belgium, 4 pks. R. W. Greeff & Co.
Italy, 40 B. & F. Wf. Co.
Holland, 17 ,,

Ultramarine—
Belgium, 5 pks. W. Harrison & Co.
U. States, 5 cs. Hasffner, Hilpert, & Co.
Holland, 3 Herne, Peron, & Co.
Germany, 48 cks. T. Hamilton

Varnish—
U. States, 5 pks. Taylor Brs.

White Lead—
Holland, 3 cks. J. L. Lyon & Co.
Germany, 24 D. Storer & Sons
Belgium, 25 brls. J. L. Lyon & Co.
Germany, 13 cks. W. A. Rose & Co.
" 30 N. J. Fenner & Co.
Holland, 20 E. J. Diggins
" 59 T. & W. Farmiloe
Belgium, 102 "
Austria, 24 cs. M. D. Co.

Wood Pulp—
Sweden, 20 pks. W. E. Bott & Co.
U. States, 233 Henderson, Craig, & Co
Germany, 614 E. J. & W. Goldsmith
Denmark, 16 Johnsen & Jorgensen
U. States, 192 Staley, Radford, & Co.
Belgium, 1,048 E. J. & W. Goldsmith

Zinc Oxide—
Holland, 155 brls. M. Ashby, Ltd.
Germany, 500 cks. Soundy & Sons
" 110 Prprs. Dowgate Dk.
" 80 M. Ashby, Ltd.
U. States, 100 "
Holland, 25 J. Matton

LIVERPOOL.

Week ending October 15th.

Aniline Colours—
Paris, 4 cks.

Asbestos—
Hamburg, 4 bls.

Barytes—
Rotterdam, 62 cks.

Bone Ash—
B. Ayres, 2,420 bgs. W. B Dickinson & Co.
" 25 H. Brown

Bone Meal—
Bombay, 100 bgs.

Boracite—
Panderma, 125 t.

Borax—
Mollendo, 1,580 sks. Hainsworth Watson
" 400 A. & S. Henry & Co.

Castor Oil—
Coconada, 250 cs.
Marseilles, 12 1 ck.

Cobalt Ore—
Rouen, 8 cs. R. J. Francis & Co.

Colours—
Antwerp, 4 cks.
Ghent, 4 brls. J. T. Fletcher & Co.
" 147 8 cs.
Stettin, 150 cks. 50 kgs.

Copper Sulphide—
Callao, 2 sks. W. R. Grace & Co.

Cottonseed Oil—
New York, 100 brls.
Callao, 304 sks.

Cream of Tartar—
Tarragona, 5 btls.
Oporto, 5 cks. Sachse & Klemm
Barcelona, 5
Marseilles, 3

Dyestuffs—
Cochineal
Gd. Canary, 4 bgs. L. H. Behrens & Co
" 24 Kennedy & Moor
Extracts
New York, 18 cks. E. M. Schneich
Fustic
Colon, 33 t. Widow Duranty & Son
Trieste, 10
Logwood
Fort Liberte (Hayti), 445 t.
Puerto Plata, 4 E. Chaloner & Co.
Valonia
Syra, 106 bgs. L. J. Vuzunaras
Smyrna, 4
Patras, 450 Papayanni & Jeremias

Farina—
Fiume, 100 bgs. Van der Veen & Co.
" 200
Stettin, 10

Glucose—
New York, 300 brls. T. M. Duche & Sons
" 293
" 4 J. Anictaciades
Boston, 800
Hamburg, 40 cks.

Glue—
Fiume, 15 bls. Kruger, Darsie & Co.
" 100 Steinhoff, Sons & Co.
Rouen, 1 6 cks. Co-op. W'sale Society, Ld.
Rotterdam, 15 cs. 13 cks. 200 bgs.

Guano—
Hamburg, 1 cs.

Insecticides—
Trieste, 5 brls. J. L. Lyon & Co.

Lead Acetate—
Hamburg, 55 cks.

Manganese—
Baltimore, 40 cs.

Manure—
Hamburg 300 bgs.

Mineral White—
Fiume, 102 bgs.

Minium—
Rotterdam, 19 cks.

Molasses—
N. Orleans, 1,000 brls. F. W. Simmonds & Son

Ochre—
Alicante, 53 brls.
Marseilles, 90 cks.

Paraffin Scale—
New York, 544 brls. Thompson & Bedford

Phosphate Rock—
Brunswick, Ga., 800 t.

Phosphates—
Bona, 300 t. Bradbury & Hirsch

Phosphoric Acid—
Hamburg, 14 cks.

Potashes—
Montreal, 50 brls.
Dunkirk, 31 cks.

Potassium Oxalate—
Rotterdam, 5 cks.

Pyrites—
Huelva, 4,512 t. T. Mathieson & Co.

Saltpetre—
Hamburg, 30 kgs. 4 cks.

Soap—
Smyrna, 1 bx. W. Carson & Sons
Marseilles, 1,330 cs.
Bari, 221
Newport News, 165 brl.

Starch—
Boston, 2 sks. J. T. H. Bythman
Baltimore, 100 bgs.
Hamburg, 28 cs.
New York, 2 bxs.
Rotterdam, 200
Boston, 700

Tallow—
Baltimore, 60 tcs.
New York, 20 brls. Colby & Co.
N. Orleans, 550 Bigland, Sons & Co.
" 250 Co-op. W'sale Society, Ld.
Philadelphia, 250 G. E. Chase
San Francisco, 600 brls.

Tartar—
Bordeaux, 35 cks.
Hamburg, 2
Naples, 1

Tartaric Acid—
Marseilles, 5 cks.
Bari, 12

Treacle—
Philadelphia, 50 brls.

Ultramarine—
Hamburg, 13 cs.

Varnish—
New York, 4 brls. W A. Warren

Verdigris—
Bordeaux, 1 cs.

Waste Salt—
Hamburg, 500 bgs.

White Lead—
Rotterdam, 85 cks.

Wood Pulp—
Kragero 3 300 bls. H. Tyrer & Co.
Ronneby, 3 491 "
Frederikshald, 3,780
Skien, 1,564
Sannesund, 2,401
Hamburg, 128 80 pks.
Rotterdam, 72

Zinc White—
Rotterdam, 25 cks.

MANCHESTER.

Week ending October 17th.

Alum—
Rotterdam, 200 bgs.
Antwerp, 6 brls.

Ammonium Acetate—
Rotterdam, 2 brls.

Aniline Salts—
Hamburg, 5 cks.

Antimony—
Hamburg, 3 cks.

Antimony Salt—
Rotterdam, 10 cks

Asbestos—
Rouen, 1 ble. 1 cs.

Barytes—
Rotterdam, 100 bgs.

Chemicals *(otherwise undescribed)*
Rotterdam, 19 cks.
Hamburg, 1 cs.

Chrome Acetate—
Rotterdam, 5 brls.

Colours—
Boulogne, 3 cks.
Rotterdam, 43 54 cs. 22 bxs. 169 brls.
Hamburg, 5 6
Ghent, 3 pks.

Cottonseed Oil—
Rotterdam, 100 brls.

Dyestuffs—
Alizarine
Rotterdam, 208 cks. 1 cs. 3 bxs. 38 brls.
Cutch
Rouen, 60 cs.

Farina—
Stettin, 800 bgs. Brown, Geveke, & Co.
" 742
Hamburg, 100

Glucose—
Stettin, 218 bgs.

Glue—
Stettin, 20 bgs.
Rouen, 8 cs.
Treport, 3 bls. 2
Antwerp, 7

Lead Acetate—
Stettin, 12 cks.

Limestone—
Antwerp, 3 crts. 5 cs.

Naphthol—
Rotterdam, 4 cks.

Phosphate Rock—
Brunswick, 200 t.

Pitch—
Rotterdam, 3 cks.

Potassium Chromate—
Hamburg, 1 ck.

Potassium Sulphate—
Rotterdam, 100 cks.

Salt—
Rotterdam, 4 brls.
Hamburg, 5 cks. 10 cs.

Soda Crystals—
Rouen, 10 cs.

Sodium Nitrate—
Rotterdam, 19 cks.

Starch—
Rotterdam, 35 cs.
Hamburg, 400
Ghent, 24
Antwerp, 369

Stearine—
Antwerp, 13 bgs.

Tartar—
Rotterdam, 2 cks.
Hamburg, 10

Tartaric Acid—
Rotterdam, 2 cks.

Waste Salt—
Hamburg, qty.

Wood Pulp—
Copenhagen, 500 bls.
Hamburg, 80 pks.
Sundsvall, 24,000

Zinc Oxide—
Rotterdam, 25 brls.

Zinc White—
Rotterdam, 5 cks.

HULL.

Week ending October 17th.

Albumen—
Riga, 10 cs.

Asbestos—
Genoa, 5 pks. Wilson, Sons, & Co., Ld.
" 8 cs.

Barytes—
Rotterdam, 63 cks. W. & C. L. Ringrose
Bremen, 64
Antwerp 200 bgs.

Camphor—
Hamburg, 4 cks. Wilson, Sons, & Co., Ld.

Castor Oil—
Genoa, 20 cs. Wilson, Sons, & Co., Ld.

Chemicals *(otherwise undescribed)*
Hamburg, 49 cks. Wilson, Sons, & Co., Ld.
Bremen, 1 cs. Veltmann & Co.
Antwerp, 1,104 pks. Wilson, Sons & Co., Ld.
Dunkirk, 37 7 dms. "

Colours—
Antwerp, 14 pks. Wilson, Sons, & Co., Ld.
Stettin, 12 cks.
Amsterdam, 1 Hutchinson & Son
Bremen, 4 J. & T. Seddon
Rotterdam, 25 tins 5 cs. Hutchinson & Son
" 19 cks. 16 W. & C. L.
14 brls. 135 pks. Ringrose
" 3 Wilson, Sons, & Co., Ld.
Hamburg, 8 "
" 20 5 cs.

Cottonseed Oil—
New York, 200 brls. Wilson, Sons, & Co., Ld.

Cream of Tartar—
Rotterdam, 2 cks. Hutchinson & Son

Dyestuffs—
Alizarine
Rotterdam, 6 cks. W. & C. L.
74 brls. 11 cs. 14 pks. Ringrose
Madders
Rotterdam, 7 cks. Hutchinson & Son
Shumac
Trieste, 43 bgs. Wilson Sons, & Co., Ld.
Palermo, 1,425 "
" 400

Farina—
Harlingen, 100 bgs. W. & C. L. Ringrose
Stettin, 500 8 cks. Wilson, Sons, & Co., Ld.
Hamburg, 600 "
" 100

Glucose—
Stettin, 200 bgs. Wilson, Sons, & Co., Ld.
New York, 150 brls.
Rotterdam, 50 bgs. Hutchinson & Son

Glue—
Rouen, 8 bls.
" 41 cks. Rawson & Robinson
Hamburg, 10 bgs. Wilson, Sons, & Co., Ld.
Antwerp, 5 cks. Bailey & Leetham
Dunkirk, 25 Wilson, Sons, & Co., Ld.

Naphthol—
Rotterdam, 2 cks. Hutchinson & Son

Ochre—
Rouen, 8 cks.
Melbourne, 98

Paint—
New York, 50 cs. Wilson, Sons, & Co., Ld.
Antwerp, 30 dms. "

Paraffin Wax—
New York, 130 brls. Wilson, Sons, & Co., Ld.
800 bgs.

Pitch—
Antwerp, 18 cks.

Plumbago—
Leghorn, 350 bgs.
Genoa, 150 Wilson, Sons, & Co., Ld.

Pumice Stone—
Rotterdam, 1 cs. Hutchinson & Son
Hamburg, 1 Wilson, Sons, & Co., Ld
Messina, 21 ,,

Pyrites—
Huelva, 829 t.

Saltpetre—
Rotterdam, 5 cks. Hutchinson & Son

Soap—
Marseilles, 5 cs. Wilson, Sons, & Co., Ld.
,, 2 dms.
Rotterdam, 4 cs. Reckitt & Sons

Soda—
New York, 4 brls. Wilson, Sons, & Co., Ld.

Sodium—
Stettin, 10 cks. Wilson, Sons, & Co., Ld.

Starch—
Antwerp, 80 cs. Bailey & Leetham
Bremen, 2,246 Veltmann & Co.
Ghent, 172 Wilson, Sons, & Co., Ld.
Antwerp, 20 ,,

Stearine—
Antwerp, 20 bgs. Bailey & Leetham
,, 72 Wilson, Sons, & Co., Ld.

Sulphur—
Catania, 100 bgs. Wilson, Sons, & Co., Ld.
,, 400

Tallow—
St. Petersburg, 10 cks. Wilson, Sons, & Co., Ld.
Boston, 114 tcs. ,,
New York, 120 428 pkgs. ,,

Tar—
Stockholm, 10 brls. Wilson, Sons, & Co., Ld.

Tartar—
Marseilles, 5 cks. Wilson, Sons, & Co., Ld.

Tartaric Acid—
Bari, 54 cs. Wilson, Sons, & Co., Ld.

Treacle—
Boston, 25 brls Wilson, Sons, & Co., Ld.
New York, 1,891 ,,

Turpentine—
Libau, 53 brls.

Ultramarine—
Rotterdam, 8 cs. Hutchinson & Son

Varnish—
New York, 40 pks.

White Lead—
Antwerp, 31 cks Bailey & Leetham
Rotterdam, 104 Hutchinson & Son

Wood Pulp
Stockholm, 80 bls. W. Shipstone & Co.
,, 100
Christiania, 4,253 pks. Wilson, Sons, & Co., Ld.
Gothenburg, 1,330 ,,
Hamburg, 8 bls. ,,
Bremen, 80 Veltmann & Co.
Abo, 95 J. Good & Sons

Zinc Ashes—
Amsterdam, 5 cks. Hutchinson & Son

Zinc Oxide—
Antwerp, 50 cks. Bailey & Leetham

GLASGOW.

Week ending October 22nd.

Acetate of Manganese—
Hamburg, 1 ck.

Alumina Sulphate—
Antwerp, 100 cks.

Aniline—
Rotterdam, 3 cks. 20 brls. 7 bxs. J. Rankine & Son

Arachide Oil—
Rotterdam, 10 cks. J. Rankine & Son

Asbestos—
Montreal, 649 bgs.

Barium Sulphate—
Antwerp, 18 cks. 450 bgs.

Barytes—
Rotterdam, 45 cks. J. Rankine & Son

Castor Oil—
Antwerp, 28 cks.

Cod Oil—
St. John's, N'fld., 268 cks.

Colours—
Rotterdam, 2 cks. 2 bxs. J. Rankine & Son
Antwerp, 9

Dyestuffs—
Alizarine
Rotterdam, 26 brls. 1 bx. J. Rankine & Son
,, 35 pks.
Extracts
New York, 100 bxs.
Indigo
Rotterdam, 1 cs. J. Rankine & Son
Madder
Rotterdam, 2 cks. J. Rankine & Son

Glucose—
New York, 248 brls. 500 bgs.

Glue—
Rotterdam, 8 cks. 10 cs. J. Rankine & Son

Manganese—
Baltimore, 33 pks.

Paint—
Montreal, 34 pks.

Phosphorus—
Baltimore, 5 cs.

Potash—
Rotterdam, 48 cks. J. Rankine & Son

Pyrites—
Huelva, 1,450 t.

Rosin—
Baltimore, 500 brls.

Salt—
Hamburg, 50 bgs.

Saltpetre—
Hamburg, 10 cks.

Starch—
New York, 3,575 bgs.
Antwerp, 50 200 cs.

Stearine—
Rotterdam, 32 cks. J. Rankine & Son

Talc—
Baltimore, 20 cs.

Tallow—
New York, 40 bls. 6 tins

Tannic Acid—
Hamburg, 4 cks.

Tartar—
Hamburg, 6 cks. 5 kgs.

Waste Salt—
Hamburg, 142 t. 1,318 bgs & qty.

White Lead—
Rotterdam, 70 cks. J. Rankine & Son

Wood Pulp—
Christiania, 1,694 bls.
Hamburg, 203
Gothenburg, 160

Zinc Ashes—
Antwerp, 8 cks.

Zinc Oxide—
New York, 50 bls.
Hamburg, 21 cks.
Rotterdam, 25 J. Rankine & Son

TYNE.

Week ending October 17th.

Barium Chloride—
Rotterdam, 250 bgs. Tyne S. S. Co.

Barytes—
Amsterdam, 200 bgs. W. Swanston
Rotterdam, 333 57 cks. Tyne S. S. Co.

Cod Oil—
Bergen, 15 brls.

Colours—
Antwerp, 1 brl. Tyne S. S. Co.

Glue—
Rotterdam, 5 cks. Tyne S. S. Co.
Hamburg, 5 ,,

Lead Acetate—
Hamburg, 4 cks. Tyne S. S. Co.

Ochre—
Rouen, 222 cks. Wm. Young & Co.

Paint—
Rotterdam, 2 tins Tyne S. S. Co.

Phosphate—
Ghent, 150 t.

Pitch—
Rotterdam, 13 cks. Tyne S. S. Co.

Rosin—
New York, 500 brls. Furness, Withy, & Co.

Salt—
Harburg, 260 t.

Soap—
Rotterdam, 5 cs. Tyne S. S. Co.

Starch—
Antwerp, 160 cs. Tyne S. S. Co.

Ultramarine—
Hamburg, 15 cks. Tyne S. S. Co.

Waste Salt—
Harburg, 240 t.

Wood Pulp—
Christiania, 480 bls.
Gothenburg, 97

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.

GOOLE.

Week ending October 14th.

Acetic Acid—
Rotterdam, 5 cks. 40 crbys.

Alizarine—
Rotterdam, 159 cks.

Alkali—
Calais, 14 cks.

Aniline—
Hamburg, 39 cks. 4 cs.
Rotterdam, 214 40

Antimony—
Boulogne, 1 ck.

Chemicals *(otherwise undescribed)*
Hamburg, 1 ck.

Dyestuffs *(otherwise undescribed)*
Hamburg, 30 cs.
Boulogne, 62 cks. 54
Rotterdam, 44 1

Extracts—
Hamburg, 2 cs.

Glucose—
Hamburg, 2 cks.

Logwood—
Monte Christe, 530 t.
Belize, 337
Campeche, 312

Madder—
Rotterdam, 10 cks.

Pitch—
Rotterdam, 82 cks.

Potash—
Hamburg, 25 dms.
Dunkirk, 6 cks. 20
Calais, 25

Saltpetre—
Hamburg, 1 ck.
Rotterdam, 100 kgs.

Waste Salt—
Hamburg, 78 cks. 300 bgs.
190 t.

GRIMSBY.

Week ending October 17th.

Caoutchouc—
Hamburg, 11 cs.
Rotterdam, 2
Antwerp, 4

Chemicals *(otherwise undescribed)*
Hamburg, 2 cks. 8 cs.
Antwerp, 1

Dyes—
Antwerp, 81 pks.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 21st.

Acetic Acid—
Dunedin, 30 cs. £55

Alkali—
Canterbury, 2 t. 18 c. £74
Cape Town, 14 13
Hobart, 1 4 10
Natal, 1 13 38
Archangel, 49 15 382

Ammonia—
Brisbane, 10 c. £56
Bombay, 6 pks. 23

Ammonia (Liquid)—
Colombo, 5 cs. £21

Ammonium Carbonate—
Montreal, 1 t. 3 c. £30
Cologne, 1 2 29
Melbourne, 10 16
Townsville, 1 15
New York, 10 2 264
Algoa Bay, 5 11
Lisbon, 15 20

Ammonium Chloride—
Ghent, 4 cks. £25
Antwerp, 23 84
Galatz, 15 c. 25
Varna, 1 t. 14 55

Ammonium Sulphate—
Madras, 4 t. 16 c. £35
Antwerp, 140 1,120
Dunkirk, 10 75
Ostend, 10 80
Colombo, 60 7 544
Demerara, 65 13 460
Jersey, 250 1,025
Rouen, 60 12 480
Rotterdam, 51 26 365

Arsenic—
Lyttelton, 80 dms. £5
Napier, 10 t. 237
Wellington, 8 14 c. 49
Wanganui, 2 54

Bisulphite of Lime—
Calcutta, 8 t. £36

Bone Ash—
E. London, 1 t. 10 c. £40

Borax—
Brussels, 1 t. 4 c. £8
Napier, 6
Dunedin, 1
Auckland, 1 tk.
Braila, 5 cks
Brisbane, 4
E. London, 5
Calcutta, 14

Carbolic Acid—
Brisbane, 32 dms. £11
New York, 20
Brussels, 20
Napier, 75

Carbonic Acid Gas—
Jersey, 17 tubes £19
Barcelona, 4 t. 11

Caustic Potash—
Napier, 4 t. 10 c. £82
Caustic Soda—
Dunedin, 10 t. 8 c. £75
Christchurch, 7 18 53
Philadelphia, 17 171
Melbourne, 4 13 87
Sulina, 1 5 22
Natal, 2 6 53
Sydney, 5 46
Algoa Bay, 6 8
Lyttelton, 5 6 39
Chemicals *(otherwise undes.)*—
Bombay, 2 cs. £19
Natal, 4 17
Auckland, 8 pks. 184
Lisbon, 17 c. 10
Bangkok, 14 26
Melbourne, 2 7 172
Dunkirk, 21 14 800
Demerara, 13 8 50
Hamburg, 18 6 495
E. London, 3 14
Porto Alegre, 4 17
Rouen, 1 48
Kurrachee, 2 11
Calcutta, 1 21
Constantinople, 2 cks. 110
Sydney, 8 31
Citric Acid—
Hamburg, 2 cks. 26 kgs. £223
Sydney, 1 t. 10 c. 189
Amsterdam, 1 ck. 31
Genoa, 18 kgs. 110
Rotterdam, 5 31
Wellington, 1 7
Dunedin, 1 6
Auckland, 3 17
Melbourne, 1 140
Bombay, 1 7
Brussels, 11 62
Odessa, 10 65
St. Petersburg, 3 75 828
Dantzig, 1 ck. 32
Brisbane, 2 cs. 15
Coal Products—
Aniline Dye
Wellington, 1 cs. £6
Aniline Oil
Ghent, 2 dms. £110
Melbourne. 1 cs. 42
Aniline Salts
Ghent, 1 ck. £20
New York. 106 1,100
Asphaltum
Amsterdam, 7 cks. £10
Benzol
Amsterdam, 12 dms. £236
Creosote
Dieppe, 23,500 galls. £123
Stettin, 10 brls. 7
Naphtha
Le Treport, 60 cks. £160
Melbourne, 10 crts 10 dms. 29
Wellington, 10 7
Naphthaline
Philadelphia, 679 bgs. £133
Calais, 6 cks. 50
Cologne, 2 20
Hamburg, 52 7 103
Pitch
Boston, 100 cks. £54
Newport News, 250 209
Chantenay, 895 t. 1,890
Antwerp, 800 1,321
Madagascar, 5 dms. 1
Terneuzen, 250 444
Tar
Madagascar, 5 dms. £1
Bangkok, 40 9
Ghent, 10 brls 8
Colombo, 45 61
Naples, 5 cks. 55
Genoa, 10 110
Dunedin, 8 6
Brisbane, 50 5
Invercargill, 3 3
Tar Oil
Melbourne, 15 cks. £28
Coal Products *(otherwise undes.)*—
Sydney, 25 brls. £26
Cream of Tartar—
Sydney, 2 t. 5 c. £197
Napier, 2 9
Dunedin, 10 44
Auckland, 1 1 99
Melbourne, 1 5 1 brl. 121
Nelson, 2 10
Hobart, 5 28
Launceston, 3 10
Fremantle, 1 95
Cyanogen Bromide—
Montreal, 14 c. £168
Disinfectants—
Singapore, 4 pks. £13
Melbourne, 9 cs 48
Bushire, 12 cks. 18
Fremantle, 10 28
Jamaica, 20 dms. 18
Natal, 60 19
Penang, 200 10 154
Algoa Bay, 3 11
Lyttelton, 40 90
Manures—
Brisbane, 8 t. 18 c. £520
Auckland, 111 10 415
Landerneau, 140 1,400
Rouen, 81 9 327
Bordeaux, 81 9 316
Havre, 25 75
Ghent, 42 6 48
Jersey, 54 10 180
Dunedin, 51 280
Hamburg, 19 14 50
Cape Town, 100 480
Teneriffe, 15 9 100
Potash Crystals—
Halifax, 3 cs. £10
Potashes—
Rio de Janeiro, 4 c. £7
Potassium Cyanide—
Sydney, 10 c. £65
Delagoa Bay, 10 54
Potassium Nitrate—
Townsville, 5 cks. £9
Potassium Prussiate—
Genoa, 6 cks. £81
Potassium Sulphate—
Jersey, 13 t. £132
Salt Cake—
Antwerp, 140 t. £245
Melbourne, 27 11 c. 58
Saltpetre—
Gibraltar, 5 t £113
Auckland, 1 10 c. 34
Montreal, 5 165
Napier, 10 11
Natal, 1 10 29
Rio de Janeiro, 2 18 66
Hobart, 10 12
Sydney, 7 157
Sheep Dip—
Dunedin, 5 cks. 360 dms. £188
Oamaru, 60 cs. 150
Brisbane, 17 c. 16
B. Ayres, 17 t. 18 120 480
Gallegos, 32 18 109
111 dms 67 cks. 159 kgs 45 pks. 1,945
Cape Town, 2 t. 76
Soda—
Wellington, 6 c. £5
E. London, 10 7
Soda Alkali—
Archangel, 31 t. £420
Soda Ash—
Lyttelton, 4 t. 19 c. £24
Soda Crystals—
Pernambuco, 3 t. 1 c. £8
Newcastle, 15 45
Soda Salts—
New York. 9 t. 3 c. £120
Sodium Bicarbonate—
Lyttelton, 1 t. 5 c. £9
Natal, 1 14
Fremantle, 1 8
Salonica, 10 7
Sodium Carbonate—
Fremantle, 15 c. £9
Sodium Prussiate—
Genoa, 12 c. £28
Sodium Sulphate—
Ghent, 70 t. £100
Sulphur—
Trinidad, 1 t. 17 c. £18
Dunedin. 2 10
Puerto Limon, 10 7
Hobart, 9 5
Natal, 1 8
Sulphuric Acid—
Algoa Bay, 6 t. £45
Natal, 25 cs. 19
Penang, 3 15 c. 18
Madras, 14 12
Tartaric Acid—
Adelaide, 5 c. £30
Bunbury, 4 cs 24
Auckland, 10 50
Dunedin, 3 20
Sydney, 1 t. 10 188
Brisbane, 1 120
Natal, 2 14
Kurrachee, 4 26
Fremantle, 10 69
Melbourne, 2 15 339

LIVERPOOL.

Week ending October 21st.

Alum—
Galatz, 4 t. £20
Piræus, 5 1 c. 23
B. Ayres, 1 10 9
Cape Town, 10 4 1 q. 47
Savanilla, 1 5
Montreal, 17 19 2 82
Varna, 2 1 2 10
Sfax, 1 1 5
Aluminous Cake—
Melbourne, 4 t. 6 c. 2 q. £17
Ammonium Carbonate—
Aalborg, 1 t. 2 c. 1 q. £29
Veibe, 1 2 1 29
Hamburg, 6 2 10
Bordeaux, 10 14
Danzig, 1 30
Montreal, 1 5 37
Paris, 1 15 53
Ammonium Chloride—
Ancona, 1 t. £35
Galatz, 18 c. 1 q 31
Bombay, 1 16 60
Odessa, 1 1 36
Stettin, 1 13 46
Alexandria, 1 8 49
Patras, 4 8
Trieste, 1 33
Yokohama, 1 20
Genoa, 6 6 142
Ammonium Sulphate—
Malaga, 21 t. 8 c. 2 q. £158
Philadelphia, 51 10 2 375
Gd. Canary, 2 10 20
Bordeaux, 5 1 3 38
Palermo, 4 19 2 40
Valencia, 84 12 3 618
New York, 51 1 1 370
Toronto, 10 44
Barcelona, 100 19 3 745
Binitro Toluol—
New York, 1 t. 6 c. 2 q. £80
Bleaching Powder—
Alexandria 3 cks. 20 brls.
Boston, 658
Calcutta, 126
Constantinople, 6
Dunkirk, 18
Genoa, 235
Havana, 25
Leghorn, 10
Maceio, 7
Montreal, 94
Nantes, 40
Newport News, 42
New York, 311
Oporto, 30
Paris, 20
Philadelphia, 72
Rotterdam, 6
Rouen, 30
San Sebastian, 30
Syra, 5
Tampico, 130
Boracic Acid—
Germany, 2 t. 4 c. 3 q. £56
Hiogo, 2 19 1 73
Yokohama, 2 19 1 73
Antwerp, 7 16 2 183
Hamburg, 6 17 2 197
Paris, 10 300
Melbourne, 6 200
Borax—
Stettin, 1 t. 9 c. 2 q. £28
Hiogo, 3 8 1 58
Yokohama, 3 9 57
Callao, 2 40
Amsterdam, 2 10 58
Hamburg, 26 2 520
Trieste, 6 8 117
Palermo, 11 1 11
Sydney, 1 20
Melbourne, 2 50
Genoa, 4 4 2 85
Montreal, 2 2 2 49
Barcelona, 9 19 199
Algoa Bay, 6 3 2 130
Antwerp, 11 8 227
Calcium —
Sydney, 5 t. 19 c. £14
Calcium Chloride—
New York, 10 t. 4 c. £23
Carbolic Acid—
Lagos, 1 c. 3 q. £3
Newport, 5 t. 12 3 269
Hamburg, 1 7 89
Rouen, 5 250
Odessa, 5 1 18
Carbonic Acid Gas—
Gibraltar, 12 c. 3 q. £15
Caustic Potash—
E. London, 6 c. £10
Caustic Soda—
Barcelona, 240 dms. 108 cks.
Amsterdam, 122
Baltimore, 25
Bari, 68
B. Ayres, 275
Calcutta, 34
Catania, 72
Colon, 38
Constantinople, 40
Copenhagen, 18
Galatz, 50
Genoa, 425
Hamburg, 75
Havana, 90
Hong Kong, 10
Jaffa, 100
Maceio, 5
Melbourne, 197
M. Video, 35 kgs.
Montreal 95
N. Orleans, 200
New York, 494
Norderham, 2
Oporto, 90
Paris, 45
Patras, 17
Pernambuco, 150
Perth, W. A., 15
Philadelphia, 330
Rangoon, 20
Rio de Janeiro, 37
Rotterdam, 38 30
San Juan, 8
Singapore, 10
Sydney, 92
Tampico, 4 brls.
Tarragona, 26
Valparaiso, 5
Vancouver, 16
Venice, 17
Chemicals *(otherwise undescribed)*
Cairo, 1 t. £35
Volo, 7 c. 12
Piræus, 5 8
Genoa, 10 17
Rotterdam, 10 18
Callao, 5 1 q. 10
Loanda, 1 1 6
Bonny, 5 67
Bombay, 15 8 3 85
New York, 20 3 760
Hamburg, 16 23
Montreal, 1 30
Odessa, 19 10 563
Konigsberg, 10 15
Stettin, 18 27
Bremen, 15 21
China Clay—
Bilbao, 1,477 bgs.
Boston, 530 cks.
Calcutta, 77
Montreal, 51 305
Naples, 40
Philadelphia, 256
Rangoon, 40
Citric Acid—
Tampico, 3 c. £19
Mexico City, 1 6
Coal Products—
Alizarine
Lisbon, 1 ck.
Aniline Oil
Lisbon, 1 brl.
Rouen, 3 dms.
Aniline Salts
Bombay, 2 cks.
Montreal, 24 cs.
Naples, 20
New York, 39
Piræus, 20
Naphthaline
Antwerp, 313 bgs.
Pitch
Rouen, 1 ck. 5 brls.
Tar
Cape Coast, 12 cks.
Galatz, 60 brls.
Ibrail, 50
Puerto Cabello, 12
Sierra Leone, 10
Sulina, 320 bls.
Copper Sulphate—
Rio de Janeiro, 2 t. 19 c. £60
Bari, 2 12 41
B. Ayres, 1 16
Rotterdam, 10 8
Bordeaux, 5 13 2 q. 82
San Sebastian, 1 19 1 30
Naples, 6 13 3 107
Catania, 7 11 1 123
Amsterdam, 2 32
Paris, 54 19 2 851
Galatz, 3 13 57

Rouen, 9 18 155
Victoria, 2 17 48
Christiania, 1 6 3 21
Konigsberg, 1 9 2 23

Gelatine—
New York, 530 bxs.

Guano—
Malaga, 50 t. £400

Lime—
Lagos, 18 t. £20

Magnesium Chloride—
Philadelphia, 9 t. 2 c. £13

Magnesium Sulphate—
Colombo, 20 cks.
Madras, 25 5 bgs.
Montreal, 80 brls.
Porto Alegre, 2 cs.

Manure—
Shanghai, 23 t. £80
Bordeaux, 4 9 c. 25
Colombo, 1 7

Oxalic Acid—
Stettin, 1 t. 2 c. 3 q. £25

Paint—
Bathurst, 10 dms.
Bonny, 1 kg.
B. Ayres, 2 cks.
Cartagena, S.A., 40
Corinto, 2 cs. 16
Havana, 3
Hong Kong, 80
Iquique 8
Kingston, 10 498
Lagos, 66 pks.
Las Palmas, 70
Maceio, 1 bx. 4
Manaos, 5 10
Mollendo, 10 cs.
New York, 4 50
Old Calabar, 14
Opobo, 3
Para, 13
Pimentel, 34 cs.
St. Thomas, W.I., 1 10
Savanilla, 420
Sierra Leone, 50
Valparaiso, 45
Vera Cruz, 30
Warre, 5

Painters' Colours—
Akassa, 20 kgs.
Antwerp, 4 dms.
Bahia, 23 pks.
Beyrout, 70
Boston, 1 cs. 25 cks.
B. Ayres, 12 157 50
Calcutta, 5
Genoa, 10
New York, 200 595 brls.
Norderham, 5 15 2 dms.
Novo Redondo, 2 3 brls. 30
Quebec, 30
Rangoon, 100 bgs.
Rotterdam, 100
San Juan, 80 kgs. 13
Salaora, 2 cs. 1 brl. 13
Stettin, 2
Trieste, 100 bgs
Trinidad, 3
Tuticorin, 1
Valparaiso, 250

Paraffin Wax—
Bombay, 6 cs.
Constantinople, 60
Smyrna, 55 bgs.
Venice, 50

Phosphorus—
Havana, 5 c. 3 q. £83
Yokohama, 17 250
Hiogo, 8 125
Hong Kong, 4 3 63

Potassium Bichromate—
Vera Cruz, 1 t. 2 c. £46
Bombay, 15 38
San Sebastian, 1 19 82
Rouen, 1 2 2 q. 49

Potassium Chlorate—
Odessa, 2 t. £84
Stettin, 5 15 c. 230
Rotterdam, 5 10
Malta, 9 17
Hamburg, 2 10 88
Oporto, 1 40
Boston, 2 10 98
New York, 16 5 626
Sydney, 7 310
Yokohama, 55 6 1,106
Hiogo, 55 4 2,050

Salt—
Algoa Bay, 16 c.
Antwerp, 165 t.
Baltimore, 280
Hereby, 7 3
Boston, 100
B. Ayres, 15 3
Cadiz, 2 5
Charleston, 1,000
Christiania, 200
Egwanga, 26 1
Hamburg, 100
Hangesund, 120
Lagos, 60
Melbourne, 189 19
Montreal, 1,115
N. Orleans, 1,665 4
Newport News, 290
New York, 315 80 bgs
Old Calabar, 20 1
Opobo, 20 1 cs.
Para, 142 17
Pt. Natal, 1
Quebec, 200
Richibucto, 56
Rotterdam, 122
Sa't Pond, 12 10
San Francisco, 34 9
Shanghai, 20
Sierra Leone, 50
Sydney, 358 50
Trinidad, 29 9
Valparaiso, 3 10

Salt Cake—
Baltimore, 25 t. 6 c. £44
Antwerp, 259 2 337
Leghorn, 100 143

Saltpetre—
Maceio, 19 c. 3 q. £21
Victoria, B.C., 1 t. 10 34
Carthagena, N.G., 15 1 19

Sheep Dip—
Baltimore, 4 t. £100
M. Video, 6 5 c. 135
B. Ayres, 69 5 2 q. 1,525

Soap—
Akassa, 44 bxs.
Alexandria, 1 cs.
Algoa Bay, 475 7 bdls.
Amboyna, 1,000
Amsterdam, 2,025 75
Antwerp, 1,500
Banda, 500
Barranquilla, 2
Benin, 300
Bombay, 250 430
B. Ayres, 1 hgd.
Callao, 43
Canaries, 240
Cape Town, 451
Cape Palmas, 224
Cape Lahou, 112
Cape Coast, 40
Christiania, 545 20 bdls.
Colon, 1 cs.
Constantinople, 20
Curacao, 288
Delagoa Bay, 50
E. London, 1,361 591
Gibraltar, 370
Gd. Canary, 10
Guayaquil, 300
Halifax, 200
Hamburg, 259
Havre, 5,091
Hong Kong, 300 dms.
Jersey, 20
Kingston, 2
Lanzarote, 51
Las Palmas, 1,680
Madras, 2
Malta, 61
Manaos, 470 1
Montreal, 529
N. Orleans, 3
New York, 5 brls. 701
Para, 200 1
Penang, 51
Piræus, 1 ck.
Pt. Natal, 1,101 35 bdls.
Rangoon, 4
Rotterdam, 6 445
Salonica, 55
St. John's, N'fd., 465 7
Santa Martha, 4
San Juan, 50
Shanghai, 10
Singapore, 75
Trinidad, 920 1
Volo,

Soda Alkali—
Hobson's Bay, 17 brls.
New York, 35
Piræus, 40
Quebec, 20
Santo Domingo, 62
Sydney, 130 2 bgs.

Soda Ash—
Aalborg, 2,000 bgs.
Bahia, 20 kgs.
Baltimore, 83 cks. 1,850
Boston, 176 43 tcs. 200
B. Ayres, 50 300 brls.
Copenhagen, 310
Corfu, 140
Genoa, 400
Ghent, 50
Gothenburg, 109
Hamburg, 9
Havana, 2
Hiogo, 230
Hong Kong, 60
Jaffa, 60
M. Video, 15
Montreal, 56 3,896
56 tcs.
New York, 16 950
Oporto, 6 pps. 10 brls.
Patras, 18
Philadelphia, 71 578 tcs. 6,000
Portland, 30
Rio de Janeiro, 80 brls.
San Francisco, 405 sks.
Santos, 25
Sourabaya, 10 cks.
Stettin, 300
Sydney, 144
Syra, 75

Soda Crystals—
Alexandria, 100 brls.
Batavia, 30 cks.
Boston, 196
B. Ayres, 600
Charleston, 50
Malta, 109
Montreal, 35 75 295 kgs
New York, 280
Pernambuco, 2
Philadelphia, 104 50 50
Pt. Said, 20
St. John's, N'fd., 25 10
Toronto, 500 380

Sodium Bicarbonate—
Amsterdam, 60 kgs.
Antwerp, 39
Barcelona, 3 cks. 110
Bombay, 18 260
B. Ayres, 5 brls. 10
Calcutta, 500
Canea 20
Charleston, 50
Constantinople, 20
Galatz, 41
Genoa, 5 225
Hamburg, 100
Havana, 20
Hiogo, 500
Hong Kong, 30
Madras, 50
Malta, 14
Melbourne, 37 8 370
Montreal, 260
New York, 50
Paris, 15 42
Philadelphia, 40
Pt. Natal, 20
Rotterdam, 280
St. John's, 270
Sourabaya, 34
Sydney, 50 bgs. 40
Tampico, 10

Sodium Bichromate—
Bari, 10 cks.
Rouen, 11 pks.

Sodium Chlorate—
Boston, 50 kgs.
Galatz, 4 brls.
Hamburg, 4 4
Rotterdam, 10

Sodium Silicate—
Acajutla, 7 dms.
Barcelona, 100 bgs.
Bilbao, 35 brls.
Genoa, 32 cks.
Melbourne, 8
New York, 10
Progresso, 20
Rio de Janeiro, 16
Smyrna, 45
Valencia, 500

Sulphur—
Boston, 200 t. 2 c. £651
Montreal, 345 6 1,254
Maceio, 11 3 q. 3
Victoria, B. C., 17 3 6
Punta Arenas, 4 18 2 33
New York, 1 3 17

Sulphuric Acid—
Guayaquil, 8 c. 2 q. £13

Superphosphate—
Gd. Canary, 3 t. £17

Tartaric Acid—
Melbourne, 5 c. £30

Varnish—
Bombay, 5 cks.
Coquimbo, 2 cs.
E. London, 3
Leghorn, 1 21 1 dm.
Montreal, 3 10 9
Naples, 3
New York, 2
Old Calabar, 2

White Lead—
Bathurst, 5 cks.
Rosario, 1
Sierra Leone, 96 kgs.
Trinidad, 18 t. 7 c.

Zinc Chloride—
Bombay, 2 t. 7 c. 3 q. £1
Rouen, 13 1

MANCHESTER

Week ending October 21st.

Albumen—
Paris, 5 cks.

Alum—
Beyrout, 30 cks.
Mersyne, 20 brls.
Tunis, 3

Alumina Acetate—
Paris, 5 brls.

Ammonium Carbonate—
Hamburg, 8 cks.
Rotterdam, 20 kgs.

Ammonium Chloride—
Tunis, 10 cks.

Aniline Dyes
Copenhagen, 1 cs.

Aniline Oil—
Rotterdam, 3 dms.
Antwerp, 4

Barium Sulphocyanide—
Paris, 3 cks.

Borax—
Tunis, 2 brl.

Carbolic Acid—
Treport, 9 cks. 10 cs.

Caustic Soda—
Alexandria, 30 dms.
Lattakia, 2
Treport, 45 26 brls.

Colours—
Rotterdam, 2 kgs. 1 dm.

Copper Sulphate—
Beyrout, 2 brls.

Cottonseed Oil—
Tunis, 70 brls.

Creosote Salts—
Treport, 78 cks.

Glue—
Rotterdam, 32 cks.

Linseed Oil—
Tunis, 11 brls.

Magnesium Chloride—
Bahia, 4 dms.

Magnesium Sulphate—
Alexandria, 60 kgs.

Paraffin Wax—
Larnaca, 3 cs.

Pitch—
Treport, 25 t.
Cette, 601

Soap—
Gibraltar, 201 cs.
Treport, 200 bxs.

Soda Ash—
Beyrout, 79 cks.
Lattakia, 24 b.
Copenhagen, 6

Soda Crystals—
Gibraltar, 140 cks. 30 brls.
Jerusalem, 13

Sodium Bicarbonate—
Alexandria, 4 cks.
Beyrout, 20 kgs.
Tunis, 25

Sodium Silicate—
Sfax, 5 cks.

Tar—
Treport, 30 cks.

Tar Oil—
Treport, 39 cks.
Antwerp, 10 6 dms.

Tar Salts—
Copenhagen, 44 bgs.
Rotterdam, 23 cks.

Toluol—
Rotterdam, 75 b s.

Zinc Chloride—
Bahia, 8

HULL.

Week ending October 17th.

ionium Sulphate—
kirk, 187 bgs.
erdam, 300
en, 201

ol—
erdam 24 cks.

ching Powder—
ingfors, 41 cks.
in, 38

tic Soda—
zig, 85 dms.
in. 37 cks.

icals *(otherwise undescribed)*
verp, 4 cks.
1 cs.
terdam, 54 10 pks.
26 btls.
nhagen, 30
stiania, 2,535 slbs. 1 23
itheim, 345
ig, 25 cks.
enburg, 27 7
burg, 6 40
gsberg, 30
u, 25
York, 25
sa, 5
5
erdam, 70 66
n, 67
tholm, 10
'etersburg, 5

nseed Oil—
verp, 522 c.
terdam, 1,380
nhagen, 187
tiansand, 34
enburg, 127
burg, 300
erdam, 1,066
in, 771
ig, 100

uffs *(otherwise undes.)—*
erdam, 55 cks.
en, 1 cs.
n, 6
erdam, 2
etersburg, 4
-
t, 20 bgs.
)—
irk, 20 t.

ed Oil—
erdam, 1,435 c.
hagen, 297
tiania, 476
tiansand, 101
theim, 186
burg, 846
rdam, 101
nger, 158
—
a, 5 cks.

ers' Colours—
erp, 26 cks.
erdam, 20
n, 24 dms.
n, 80 50 pks.
hagen, 4 cs. 2 dms.
tiania, 2 4
g, 26
t, 5
nburg, 10 1 pk.
burg, 1 brl
sberg 36
York, 25
6
rdam, 20
a 4
n, 2 1
tersburg, 123 1

in Wax—
g, 6 cs.
—
tiania, 36 c.
burg, 1 ck.
erp, 223 t.
-
erp, 13 cs.

ur—
g, 600 bgs.

V—
nburg, 16 cks.
erp, 25 cks.
en, 11
urg, 5

Varnish—
Antwerp, 1 ck.
Christiania, 1 cs.
Danzig, 5
Hamburg, 2 6
Stettin, 5

GLASGOW.

Week ending October 22nd.

Alum—
Antwerp, £28
Ammonium Carbonate—
Christiania, £12
Ammonium Chloride—
Italy, £110
Ammonium Sulphate—
Baltimore, 201 t. 6 c.
Bordeaux, 5 1½
Mauritius, 7 3
Demerara, 386 9¾
Hamburg, 50 13
Nantes, 255 1¾
Bleaching Powder—
Calcutta, 15 t.
Borax—
Mayence, 7¼ c.
Canada, £148
Toronto, 196
Coal Products—
Aniline Salts
Lisbon, £37
Carbolic Acid
Rotterdam, 11 t. 10 c.
Creosote Oil
Christiania, £14. 10s.
U.S.A., £35
Pitch
Hamburg, 20 t. 5 c.
Canada, £288
Italy, 730
Tar
Russia, £127
Rotterdam, 8 t. 15 c.
Canada, 145
Cronstadt, 100
Tar Acids
U.S.A., £33
Disinfectants—
Calcutta, £20
Dyestuffs *(otherwise undescribed)*
Lisbon, £20. 14s.
Extracts—
Antwerp, £21
Lisbon, 98
Canada, 641
U.S.A., 112
Glucose—
Canada, £120
Lead Nitrate—
Canada, £162
Italy, 94
Lime—
Demerara, 10 t.
San Fernando, 14 8 c.
Linseed Oil—
B. Ayres, 2 t. ½ c
Canada, 5 2¼
Litharge—
Montreal, £202
Logwood—
Oporto, £107
Magnesium Sulphate—
Christiania, £31
Manganese—
Basle, 11 t. 13¼ c.
Paint—
Huelva, £84
Trinidad, 51
Hamburg, 24
Painters' Colours—
Durban, £31
B. Ayres, qty.
Paraffin Wax—
Bordeaux, £295
Russia, 25
Santander, 53
Christiania, 60
Antwerp, 30
Genoa, 95
Leghorn, 32
San Sebastian, 100
Phosphoric Acid—
Demerara, £20. 18s.
Trinidad, 61
Potash Salts—
New York, £250
Canada, 30
Potassium Bichromate—
Malaga, £34
Rotterdam, 21
Antwerp, 793
Italy, 477
Potassium Cyanide—
Canada, £80
Potassium Prussiate—
New York, 4 t. 17 c.
Salt—
San Fernando, 6 t. 12 c.
Trinidad, 62 7¾
Soap—
Algoa Bay, 2 t. 4½ c.
Lisbon, 2 7
Pt. Louis, 5
Jamaica, 2 1
Sodium Bichromate—
Antwerp, 3 t. 16¼ c.
Ghent, 5 1
Italy, 40 11¼
Stannous Chloride—
Demerara, £51
Sulphur—
Demerara, 13 t. 11½ c.
Trinidad, 15
Sulphuric Acid—
Trinidad, £55
Calcutta, 30
Demerara, 100
Superphosphates—
Spain, 3 t. 18¼ c.
Demerara, 16
Tallow—
Oporto, 1 t. 1 c.
Antwerp, 19 18¼
Trinidad, £36. 10s.
Treacle—
E. London, 1 t. 5 c.
Christiania, 19 6
Bergen, 2 10
Drontheim, 4 11
Varnish—
Sicily, £21
White Lead—
San Fernando, qty.

TYNE.

Week ending October 17th.

Alkali—
Amsterdam, 46 t. 3 c.
Rotterdam, 3 6
Antwerp, 1 14
Riga, 10 7
Alum Waste—
Montreal, 4 t. 5 c.
Alumina Sulphate—
Montreal, 10 t. 5 c.
Aluminous Cake—
Konigsberg, 6 t. 9 c.
Ammonium Carbonate—
St. Petersburg, 65 cks.
Ammonium Chloride—
St. Petersburg, 5 t. 8 c.
Antimony—
New York, 60 t.
Asbestos—
Bergen, 3 q.
Barium—
New York, 4 t. 6 c.
Barium Carbonate—
Antwerp, 20 t. 18 c.
St. Petersburg, 101 3
Blanc Fixe—
Antwerp 10 t. 7 c.
Bleaching Powder—
St Petersburg, 262 t.
Christiania, 16 9 c.
Amsterdam, 11 8
Rotterdam, 27 17
Odense, 1 1
New York, 59 2
Copenhagen, 15
Hamburg, 54 18
Antwerp, 15 3
Riga, 85
Konigsberg, 4 11
Caustic Soda—
St. Petersburg, 79 t. 4 c.
Christiania, 3 18
Amsterdam, 5
Rotterdam, 29
New York, 174 18
Copenhagen, 2 7
Valencia, 58 9
Hamburg, 10 3
Antwerp, 4 15
Riga, 17 13
Konigsberg, 20 14
Montreal, 14 10
Gypsum—
New York, 38 t. 1 c.
Litharge—
Hamburg, 2 t.
St Petersburg, 2 12 c.
Montreal, 12 14
Magnesia—
Hamburg, 18 c.
Manganese—
Christiania, 14 c.
Manure—
Valencia, 155 t.
Naphthaline—
Riga, 25 t. 15 c.
Ochre—
Christiania, 1 t. 12 c.
Montreal, 2
Paint—
Trieste, 3 t.
Phosphate—
Valencia, 10 t.
Potassium Chlorate—
St. Petersburg, 24 t. 7 c.
Soda—
Holbeck, 50 t.
Bergen, 15 4 c.
Christiania, 20
Amsterdam, 20 4
Rotterdam, 27 10
Antwerp, 5
Soda Ash—
Rotterdam, 5 t. 4 .
Konigsberg, 219 4
Sodium Hyposulphite—
New York, 25 t.
Riga, 5 3 c.
Sodium Sulphate—
St. Petersburg, 25 t. 2
Gothenburg, 600
Sulphur—
Riga, 125 t.
Konigsberg, 2 11 c.
White Lead—
Copenhagen, 2 t. 14 c.
Montreal, 75 19
Whiting—
Montreal, 4 t. 6 c.

GOOLE.

Week ending October 14th.

Alkali—
Amsterdam, 35 dms.
Benzol—
Rotterdam, 146 cks.
Chemicals *(otherwise undescribed)*
Amsterdam, 10 cks
Harlingen, 30
Coal Products *(otherwise undes.)—*
Boulogne, 144 cks. 1 cs.
Ghent, 2
Hamburg, 3 1
Rotterdam, 1
Dyestuffs *(otherwise undescribed)*
Hamburg, 199 bgs.
Boulogne, 2 cks.
Logwood—
Hamburg, 5 t.
Manure—
Dunkirk, 65 bgs.
Pitch—
Antwerp, 210 t.

GRIMSBY.

Week ending October 17th.

Alkali—
Hamburg, 26 cks.
Chemicals *(otherwise undescribed)*
Hamburg, 4 btls.
Rotterdam, 40 dms.
Coal Products *(otherwise undes.)—*
Dieppe, 99 cks.
Dyestuffs *(otherwise undes.)—*
Hamburg, 9 cks.
Pitch—
Antwerp, 55 .

PRICES CURRENT. WEDNESDAY, OCTOBER 28TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids:—			
Acetic, 25 °/, and 40 °/. per cwt.	5/10½	&	8,9
,, Glacial per cwt.		40/-	
Arsenic S.G., 2000° per cwt.	1	2	0
Fluoric per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. per bottle	0	0	10
,, (Cylinder), 30° Tw. ,,	0	3	0
Nitric 80°Tw. per lb.	0	0	1⅝
Nitrous ,,	0	0	1¾
Oxalic nett ,,	0	0	3½
Phosphoric, 1750° ,,	0	0	11½
Picric ,,	0	0	11
Sulphuric (fuming 50 °/.) per ton	15	10	0
,, (monohydrate) ,,	5	10	0
,, (Pyrites, 168°) ,,	3	0	0
,, ,, 150° ,,	1	5	0
,, (free from arsenic, 145°) ,,	1	7	6
Sulphurous (solution) S.G. 1025 ,,	3	0	0
Tannic (pure) per lb.	0	1	2½
Tartaric ,,	0	1	2¾
Arsenic, white powdered nett per ton	21	17	6
Alum (loose lump) ,,	4	10	0
Alumina Sulphate (pure) ,,	4	12	6
Aluminoferric ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) nett per ton	155	0	0
Ammonia, Anhydrous ,,	0	1	4
,, ·880=28° B. per lb.	0	0	2¾
,, =24° B. ,,	0	0	1¾
,, Carbonate nett ,,	0	0	3
,, Muriate per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd per cwt.	37/-	&	35/-
,, Nitrate per ton	33	0	0
,, Phosphate per lb.	0	0	4½
,, Sulphate (grey) London per ton	7	5	0
,, ,, (grey) Hull ,,	7	2	6
Aniline Oil (pure) per lb.	0	0	10¾
Aniline Salt ,, ,,	0	0	10¾
Antimony per ton	28	15	0
,, (tartar emetic) per lb.	0	0	9¾
,, (golden sulphide) ,,	0	0	10
Barium Chloride per ton	7	0	0
,, Carbonate (native) ,,	3	10	0
,, Sulphate (native levigated) ,,	42/6	to	65/-
Bleaching Powder, 35 % nett ,,	6	12	6
,, Liquor, 7 % ,,	3	10	0
Bisulphide of Carbon ,,	14	10	0
Chromium Acetate (crystal) per lb.	0	0	6
Calcium Chloride per ton	2	2	6
China Clay (at Runcorn) in bulk ,,	15/-	to	30/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % nett per lb.	0	0	7
Magenta ,,	0	3	9
Anthracene, 30 % A, f.o.b. London per unit per cwt.	0	0	9
Benzol, 90 % per gallon	0	4	6
,, 50/90 ,,	0	3	1⅜
Carbolic Acid (crystallised 40°) per lb.	0	0	6¾
,, (crude 60°) per gallon	0	1	9½
Creosote (ordinary) ,,	0	0	1½
,, (filtered for Lucigen light) ,,	0	0	2
Crude Naphtha 30 % @ 120° C. ,,	0	1	3
Grease Oils, 22° Tw. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston ,,	1	10	0
Solvent Naphtha, 90 % at 160° per gallon	0	1	6
"Lucigen" and "Wells" Oils ,,	0	0	0
Copper per ton	48	0	0
,, Sulphate ,,	16	0	0
,, Oxide (copper scales) ,,	42	10	0
Glycerine (crude) ,,	42	0	0
,, (distilled S.G. 1250°) ,,	75	0	0
Iodine nett, per oz.	0	0	9
Iron Sulphate (copperas) per ton	1	10	0
,, Sulphide (antimony slag) ,,	2	0	0
Lead (sheet) for cash ,,	12	10	0
,, Litharge Flake (ex ship) ,,	14	10	0
,, Acetate (white ,,) ,,	21	0	0
,, ,, brown ,,) ,,	14	15	0
,, *Carbonate (white lead) pure* ,,	16	0	0
,, *Nitrate* ,,	18	10	0
Lime, Acetate (brown) (ex ship) per ton	4	7	6
,, ,, (grey) (ex ship ,,	8	2	6
Magnesium (ribbon and wire) per oz.	0	2	1
,, Chloride (ex ship) per ton	2	7	6
,, Carbonate per cwt.	1	17	6
,, Calcined Magnesia per ton.	8	15	0
,, Sulphate (Epsom Salts) per ton	2	15	0
Manganese, Sulphate ,,	16	10	0
,, Borate per cwt.	2	10	0
,, Ore, 70 % per ton	3	10	0
Methylated Spirit, 61° O.P. per gallon	0	1	8
Naphtha (Wood), Solvent ,,	0	2	7
,, ,, Miscible, 60° O.P ,,	0	2	8
Oils:—			
Cotton-seed per ton	17	0	0
Linseed ,,	18	10	0
Petroleum, American per gallon	0	0	7
Stearine per ton	20	10	0
Phosphorus (yellow) per lb.	0	2	2
,, (red) ,,	0	2	8
Potassium (metal) per oz.	0	3	7
,, Bichromate nett per lb.	0	0	4¾
,, Carbonate, 90% (ex ship) per ton	17	10	0
,, Chlorate per lb.	0	0	4
,, Cyanide, 98% ,,	0	1	1
,, Hydrate (Caustic Potash) 90 % per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % ,,	19	10	0
,, Nitrate (refined) per cwt.	1	1	6
,, Permanganate ,,	3	17	6
,, Prussiate Yellow per lb.	0	0	6
,, Sulphate, 90 % (ex ship per ton	9	15	0
,, Muriate, 80 % (do.) ,,	8	10	0
Silver (metal) per oz.	0	2	5¾
Sodium (metal) per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% ,, ,,	4	0	0
,, ,, (Alkali) 58 % ,, ,,	3	10	0
,, ,, (Soda Crystals) ,, ,,	2	0	0
,, Acetate (ex-ship) ,,	14	7	6
,, Arseniate, 45 % ,,	14	10	0
,, Chlorate per lb.	0	0	5
,, Borate (Borax) net, per ton.	19	10	0
,, Bichromate ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	5	0
,, ,, (60 % Caustic Soda) ,, ,, ,,	6	5	0
,, ,, (pure liquor 90° Tw.) ,, ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate ,,	6	10	0
,, Hyposulphite ,,	5	5	0
,, Manganate, 25% ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool per cwt.	0	7	9
,, Nitrite, 98 % per ton	30	0	0
,, Phosphate ,,	12	10	0
,, Silicate (glass) per ton	4	10	0
,, ,, (liquid, 100° Tw.) ,,	3	10	0
,, Stannate, 40 % per cwt.	3	2	9
,, Sulphate (Salt-cake) per ton.	0	19	0
,, ,, (Glauber's Salts) ,,	1	10	0
,, Sulphide ,,	6	15	0
,, Sulphite ,,	5	0	0
Strontium Hydrate, 100% ,,	8	0	0
Sulphocyanide Ammonium, 95 % per lb.	0	0	6½
,, Barium, 95 % ,,	0	0	4½
,, Potassium ,,	0	0	6½
Sulphur (Flowers) per ton.	7	0	0
(Roll Brimstone) ,,	6	5	0
,, Brimstone: Best Quality ,,	4	12	6
Superphosphate of Lime (26% ,,	2	15	0
Tallow ,,	18	10	0
Tin Crystals per lb.	0	0	4¾
,, English Ingots per ton	62	10	0
Zinc (Spelter) ,,	17	0	0
,, Chloride (solution, 100° Tw.) ,,	5	2	6

THE

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CURRENT TOPICS.

FICTITIOUS REPORTS AND FINANCE.

THE dissemination of unfounded reports, for reasons best known to the perpetrators, is a piece of *finesse* which is accepted universally as a characteristic of the Stock Exchange. It is a thing which can be overdone however, and some of those who like to indulge in such tactics deserve to burn their fingers occasionally.

For some months past considerable interest has been exhibited in the decision of the case of Hay *v.* The African Gold Recovery Company, which, owing to cabled information, was considered imminent. Various rumours have been rife, but not content with any such uncertain means of influencing speculation, some person or persons have foisted a fictitious cablegram upon the unsuspecting *Financial Times*. This cablegram professed to give the purport of the judgment in the case, which was against the company, thus conveying the impression that the MacArthur-Forrest patent had been held to be invalid.

To those who had attentively followed the course of this case through the Cape Courts, the suddenness of the decision caused the news to be received with caution, as it was well known that judgment was not likely to be delivered until November.

As the African Gold Recovery Company have been the butt of a great many alarms and rumours for some time past, it appears that they have made up their minds to do their best to put an end to such Machiavellian attacks by offering a reward of £500. for information that will lead to the conviction of the individual, or individuals, who have so outrageously contravened the unwritten laws of journalism and good faith.

Though naturally to those who may have been indirectly implicated in such a seedy affair, the reward will hardly be a sufficiently luring bait; still, in matters of this kind, there are generally a few malcontents left out of the deal to whom £500. is a consideration, and it is to be hoped, for the credit of the press, that the company's zeal in exposing those who can be guilty of such covinous fabrication will be rewarded with success.

Almost as we go to press, however, the news has arrived that the official jndgment has now actually been delivered, It is against the company, and the Courts have ordered the patents to be cancelled. Though sorry to say so, we have information which proves that this cablegram is authentic beyond doubt.

AN INSTRUCTIVE NEGLIGENCE CASE.

Early in July of last year we made reference in these columns to a very serious accident at East Ham, in which four or five men lost their lives through being "gassed" in a sewer manhole. An action for damages appears to have been brought by the widow of one of the victims with a view to obtaining redress. This case was heard only last week, before Mr.

Justice Cave, in the Queen's Bench Division. The evidence showed that there were no rules for taking any precaution before going down into the manhole, nor were there any tests used for the air. It also transpired that the manhole had been covered up for some days previously to its being entered. The alleged negligence lay in the contention that the defendants' engineer had not tested the air before sending the deceased down. Evidence was also given by two doctors, showing that sulphuretted hydrogen was—to say the least—present in considerable quantities.

In summing up, however, Mr. Justice Cave gave it as his opinion that there was no negligence in this case. The duty of the defendants was to take all ordinary precautions. No sewage authority had ever been shown to have had reason to apprehend danger from the cause which occured in this case, or to have ever used the precautions which had been suggested during the hearing of the case. Judgment was therefore given for the East Ham Urban District Council, the defendants.

This is law, and we do not presume to challenge the just legality of the decision; but it certainly reveals a lamentable state of ignorance on the part of responsible authorities who are constantly employing men engaged in "dangerous occupations." Further, though the grounds of the judgment are sound in this particular instance, after such a startling demonstration of the possible risks of working in sewers, local authorities will do well not to place too much dependence upon the precedent laid down by Mr. Justice Cave when stating that no authority had had reason to apprehend danger. Events have shown that danger is not only to be apprehended, but is prevalent. And in the light of recent developments we incline to the belief that it is the latter view which is more likely to be taken in any action which may be instituted under similar circumstances.

A GOOD START.

So far, the records achieved by borax companies have been few and far between, if any; but there is an exception to be found in the case of the Pacific Borax and Redwood's Chemical Works, Limited.

It is only quite recently that reference was made to the formation of the company, yet at the statutory general meeting held last week the company were actually in a position to have declared a dividend of 12 per cent. out of the profits derived from the first six months' trading, that is, up to the end of September. As recorded elsewhere, the actual dividend declared was an interim one of 6 per cent. Registered in June, and able to pay 12 per cent. by September, indicates a rate of progress which conjures up hopes of roseate hue for the future. It is, of course, impossible to say how far borax alone has been responsible for such phenomenal results. Their announcement, however, cannot fail to remind many, of the statements of the chairman at the statutory meeting of one of the largest nitrate concerns floated in 1894. It is as well not to be over sanguine. In the present case, however, we congratulate all concerned on the achievement, and sincerely wish a lasting life to such gratifying progress.

MESSRS. GEORGE RICHARDS AND CO, LTD.—The business of George Richards and Co, Limited, Atlantic Works, Broadheath, near Manchester, manufacturers of high-class machine tools, wood-working machinery, pulleys, and line-shaft fittings, which was advertised for sale some time since, as a going concern, has recently been sold by private treaty, and will shortly change hands. The business will be carried on as heretofore under the name of Richards and Co., Limited, who will continue the manufacture of the well-known specialities of the firm. We understand that they have been exceedingly busy in all branches for the past twelve months.

AMERICAN "FILLED CHEESE."

AMONG the chief causes of the unfortunate condition of the United States foreign cheese trade are the following:—(1) Restrictions placed upon the freedom of trade between the United States and Canada; (2) the energy and success of the Canadian Government in developing and improving the production of cheese in the Dominion; (3) the short-sighted policy of cheese-makers in the United States in turning out so many poor goods and ignoring the tastes and demands of foreign customers; (4) the exportation of so much low-grade cheese or "skims," and of adulterated goods or "filled cheese" in defiance of the requirements of British markets, and the consequent degradation of a well-earned reputation. It appears that the oleo cheese, lard cheese or filled cheese, comes into market under every name except its own. Its true character and proper designation are recognised only while it is in the hands of the manufacturers' agents, and when it moves from the principal distributing point, the various brands upon it give ample evidence of the intent to deceive and defraud. Reputable merchants, however, generally refuse to handle the article. New York and Wisconsin absolutely prohibit its manufacture and sale. The most legislative contests in which filled cheese triumphed were in Indiana and Illinois. Chicago has become the chief depot and distributing point for this commodity. Even "filled" Limburger and "Swiss" cheese of American manufacture can now be found in that market.

The materials from which filled cheese is made are very cheap. The basis is skim-milk, which is so abundant in the creamery districts as to be a waste product, with hardly any value. The fats added may be oleo oil, or neutral lard, or butter of lowest grade which has been through questionable processes of renovation. Still cheaper fats may be used. It is claimed that this cheese can be put on the market at a cost of 4c. or 5c. per lb. In large lots it is freely offered at three-fourths the price of first-class cheese, or less, and yields a substantial profit at this rate. Like that of butter substitutes and butter imitations the manufacture of filled cheese has greatly improved. A good grade of neutral lard is generally used, and the product now comes to market appearing so fine in quality and with so clean a taste as to be very deceptive and difficult to detect by ordinary sampling. But there is an absence of flavour or aroma, and its quality is short-lived. As a fraudulent article, as now made and handled, is a serious menace to all honest cheese, and the vigorous warfare against it in England and Canada, and the rising tide of popular disapproval in the United States are fully justified. Experiments at various dairying centres have shown that the best milk makes the best cheese and the most of it; that the milk which is the most profitable for butter is also the most profitable for cheese; and that the best butter cow is the best cheese cow. Other things being equal, a cheese containing a large percentage of butter fat is better; because (1) of its finer flavour and taste; (2) of its better consistency; (3) of its improved aroma; (4) of its increased digestibility; (5) of its more perfectly answering the requirements of a complete food or "balanced ration." As cheese making furnishes the safest and most convenient method of disposing of all surplus milk, and thus serves as a sort of safety valve to dairying as a whole, much stress is laid on the necessity of expanding the American cheese trade, both domestic and foreign.

The Act of Congress recently passed in the United States is a very drastic measure. The term "filled cheese" is defined as including substances made of milk or skim-milk, with the admixture of fats or animal oils or fats, vegetable or any other oils, or compounds, foreign to such milk, and made in imitation or semblance of cheese. A tax of 1c. per pound on all filled cheese is to be paid by the manufacturer thereof. In addition, manufacturers of filled cheese are required to pay $400 for each and every factory per annum, wholesale dealers in filled cheese $250. per annum, and retail dealers $12. per annum. The effect of this new law is that the "filled cheese" industry is also stated to be practically killed in Illinois.

WHERE UNIONISM FAILS.—As instancing the way in which the so-called "leaders" of the industrial armies of the country lead their too easily gulled followers, it is only necessary to call attention to the case of Messrs. Gwynne and Co., the well-known engineers, who a recent dispute arose through the employed wishing to dictate to their masters what men they should employ. The firm have supplied themselves with labour from outside the ranks of the Amalgamated Engineers' Society, and are perfectly well satisfied with the change. A strike which was brought about by the society has been settled by the masters, who simply took the bull by the horns and filled the strikers' places with artisans needing employment, many of whom were supplied by the National Free Labour Association. The "leaders" will now probably be able to find employment elsewhere for their misguided dupes, and provide their families with an equivalent of what has been filched from them. When will the intelligent portion of the working classes arise and stop this folly?

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Improvements in Pneumatic Sewerage. J. F. Liernur and W. P. Liernur. 23,167. October 19.

Improvements in Coke-heated Drying Chambers. J. T. Godfrey. 23,169. October 19.

Extracting Fats, Oils, Tannins, etc., by Volatile Solvents. P. Vauchey and J. G. D. de Miomandre. 23,216. October 19.

Wicking Sulphur Candles. A. W. Gerrard. 23,220. October 20.

Vulcanising Indiarubber, etc. C. O. Weber. 23,221. October 20.

Coke Oven for Reducing the percentage of Sulphur in Coke. C. S. Fletcher. October 20.

Improved Ammoniacal Compounds. J. Pattison. 23,245. October 20.

Non-corrosive and Fireproof Paint. The Non-corrosive, Preserving, and Fire-resisting Paint Co., Ltd., F. White and J. Thompson. 23,294. October 20.

Oxidising Oils. G. R. Redgrave. 23,324. October 21.

Manufacture and Preservation of White Indigo. J. Grossmann. 23,358. October 21.

Artificial Stone. R. Walker. 23,360. October 21.

Smoke Consuming Apparatus. J. Wynn. 23,369. October 21.

Apparatus for Refrigerating Air and other Gases. H. F. Stanley and The Farringdon Works, Ltd. 23,379. October 21.

Extracting Zinc Carbonate from Calamines. M. Sandecki. 23,389. October 21.

Treating Brine for the Manufacture of Table Salt. J. W. Fox. 23,391. October 21.

Improved Refrigerating Apparatus. H. Desmarest. 23,401. October 21.

Machine for Decorticating Ramie and other Fibres. C. J. Dear. 23,427. October 22.

Smoke Consuming Appliance. W. M. Greaves. 23,437. October 22.

Composition for Preserving Wood, Iron, etc., under Water. K. F. Lindström. 23,446. October 22.

Extracting Gold and Platinum from their Ores. J. E. Chaster. 23,470. October 22.

Separating Gases and Exposing Solids to the action of the same by means of Centrifugal Apparatus. E. Theisen. 23,595. October 23.

Improvements in Manufacture of Salt from Brine and Apparatus therefor. J. W. and T. J. Weston. 23,614. October 23.

Obtaining Benzol, etc, from Mineral Oils and Liquid Tars. J. Meikle. 23,649. October 23.

Producing Hydrogen and Oxygen by Electrolysis. P. Garnti and R. Pompili. 23,663. October 24.

Treating Sewage to Destroy Animalculæ and Produce a Fertilizer. S. de Petroff. 23,676. October 24.

Substitute for Rubber, Linoleum, etc. J. Speir. 23,700. October 24.

Producing Gas from Petroleum, etc., and Apparatus therefor. H. Lane and B. T. L. Thomson. 23,701. October 24.

Improvements in the Manufacture of Zinc White. H. H. Lake. 23,716. October 24.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in Sewage Disposal Works for Towns, Villages, and the like, Draining into Tidal Waters. E. W. Ives, 2, Strand, Derby. Eng. Pat. 21,251. November 9, 1895.

This is a circular sewage tank of the type described in Patent 16,034, 1896 (*C.T.J.* 490, p. 225), and previous patents. It is modified as follows:—An upward flow precipitating tank is combined with a storage tank, having an effluent overflow weir, together with two tidal valves and an effluent outlet well. Owing to the positions and levels at which the tidal valves are placed, when the tide is in they are closed by the pressure of the water, the purified effluent passing over the weir into the storage tank. As the tide recedes the effluent once more runs off at its usual exit, and that collected in the storage tank also flows out through the opened tidal valves. There are four drawings.

Improvements in the Production of Metallic Cyanides and other Nitrogen Compounds. T. L. Willson, 19, West Thirty-eight Street, New York, U.S.A. Eng. Pat. 21,997. November 19, 1895. (Under International Convention, April 19, 1895.)

There is essentially no difference between this patent and No. 21,755, 1895 (*C.T.J.* 492, p. 261). It is really an elaboration of the claim made therein for the conversion of calcium carbide into calcium cyanide by direct treatment with nitrogen gas. In the present case however chief attention is paid to the preparation of barium cyanide and the formation of potassium cyanide by the double decomposition of the barium compound with potassium chloride. The same methods of obtaining the nitrogen gas are detailed, with the additional suggestion of passing air over copper oxide. The apparatus described (of which there is one drawing) is substantially the same as in Patent 21,755, 1895, save that the molten carbide is run off from the electrical furnace into a basin-like receptacle, wherein it is blown with nitrogen, instead of within the furnace itself.

Improvements in or Relating to the Extraction of Fats, Oils, Resins, Sulphur, Colours, Tanning Materials, and the like, by Means of Volatile Solvents, and Apparatus therefor. J. Merz, Brünn, Moravia, Austria. Eng. Pat 16,766. July 28, 1896.

The object is to prevent the condensation of steam within the material to be extracted, which generally occurs when the last traces of the solvent are being removed by steam. This end is achieved by treating the material with the vapour of the solvent heated to about 100°C., thereby expelling any condensed products with the superheated vapour of the solvent. The necessary superheating is accomplished by means of a simple addition to the apparatus employed. This is of the usual modified Merz-Soxhlet extraction type, but at the bottom of the chamber containing the material a steam coil is placed. The overhead worm condenser is also used to condense the products given off during the vapour treatment instead of condensing the excess vapour during the extraction, which is effected by a small coil in the head of the extractor. When the extraction is finished, and the last batch of solvent has been syphoned off, steam is passed through the coil previously referred to. The solvent about the coil is vapourised and the vapour heated to 100°C., which, passing upwards through the material, carries everything before it, the conjoint products being condensed in an overhead condenser, the worm of which is connected to the extractor. There is one drawing.

Improved Manufacture of Tannin Extract from Sulphite Cellulose Lyes. M. Hönig, Brünn, Austria. Eng. Pat. 18,265. August 18, 1896.

In most of the extracts prepared from wood pulp lyes, there are certain acids present which exercise an adverse influence in the tanning process. This objection can be overcome by precipitating with lime, but this treatment is only applicable to lyes from the sulphiting of oak, the tannic acid of beech, fir, and pine not being precipitated with lime. The following procedure is therefore suggested:—The lyes are first very carefully neutralised with calcium carbonate, or the oxide, and then concentrated, after settling, to about 23°Tw. or 28°Tw. They are then transferred to lead-lined boilers, mixed with enough sulphuric acid (or any other acid that forms an insoluble salt) to convert the lime into sulphate, and the whole distilled with steam until all the volatile acids are expelled. The precipitated sulphate of lime is filtered off, and the clear extract brought to a density of 48°Tw. to 52°Tw. in a vacuum apparatus. After complete clarification by deposition, the extract is ready for use as a tanning agent.

Improvements in the Manufacture of Disinfectants an Antiseptic Compounds. C. C. Whitaker, 8, Tyrrell-road, East Dulwich London, S.E. Eng. Pat. 22,364 November 23, 1895.

Twenty-five gallons of pyridine and allied bases are mixed with 100 gallons of water, or the mixture may be made in equal proportions. Next an alkaline cresylate is prepared by mixing 30 gallons of crude cresylic acid with 100 gallons of a caustic soda lye of 24°Tw. at 60°F. These two preparations are then mixed in varying proportions, and agitated with carbolic acid to saturate the whole, the undissolved portion of the acid being separated and drawn off. To the resulting clear solution about 1 % of beta-naphthol is added. By mixing with gypsum a solid disinfectant is obtained.

NEW TETANUS ANTITOXIN.—A report has been communicated to the German medical press by Professor Behring and Privatdocent Knorr upon a new tetanus antitoxin which they have discovered in the course of researches among the bye-products of the higher colouring products. The discoverers express the hope that by means of the new specific it will be possible materially to reduce the percentage of deaths arising from traumatic tetanus. The antitoxin can now be obtained, either in the form of a solution for use as a remedy in cases of traumatic tetanus in men or horses, or as a dry preparation for prophylactic treatment.

LANCASHIRE FACTORY INSPECTORS.—The recent return of inspectors under the Shop Hours Act shows that in Manchester there are six inspectors whose duties are restricted to the inspection of factories. In Salford there is but one inspector, who also holds an appointment under the Food and Drugs Act. In St. Helens the duties are performed by the head constable, assisted by three police inspectors, while in Bury the factory inspector also acts as sanitary inspector. In Warrington the inspector of nuisances is also deputed to look after the factories. In Oldham the whole of the inspectors, seven in number, are also inspectors of nuisances.

MERSEY AND IRWELL JOINT COMMITTEE.

THE usual monthly meeting of this Committee was held at the offices, Mosley-street, Manchester, on Monday, Mr. Alderman J. Thompson presiding.

The report of the chief inspector, Mr. R. A. Tatton, contained a letter from the chairman of the Ship Canal. Mr. Bythell wrote as follows :—"Our engineer has reported to the directors the effect of the recent heavy floods upon the Ship Canal and docks at the Manchester end, and they are very much disturbed to find that the quantity of refuse and sewage brought down from the upper reaches of the River Irwell and deposited in the canal and docks above Mode Wheel Locks is estimated at 200,000 tons. It is quite clear that the Joint Committee will have to continue to employ stringent measures if this continuous pollution and the washing of refuse by floods down the river are to be prevented."

WORKING PRINCIPLES.

Mr. T. W. Killick, on behalf of the Consulting Sub-committee, submitted a supplement to their report, containing an important statement as to the principles on which the Joint Committee are working. The statement is as follows :—"As there seems to be some misapprehension with regard to the principles upon which the Mersey and Irwell Joint Committee are acting, and their methods of applying those principles, the Sub-committee consider it advisable to make a short statement. First, it is desirable to call attention to the fact that

NO DEFINITE STANDARD

of purity has been adopted, and the members of the Joint Committee, on reference to the proceedings, will find that so far back as December, 1891, on the recommendation of Sir Henry Roscoe, a resolution was passed, stating that it was undesirable to define the maximum amount of pollution to be allowed, but to insist upon the best practicable and available means being used in each case, whether a sanitary authority or a manufactory. Further, in the proceedings of November 5th, 1894, it will be found that Sir Henry Roscoe again stated 'it must be distinctly understood that the standards named are only adopted for the purpose of criticising and comparing the results in these particular cases, and must not be taken as definite standards.' Up to the present time the Sub-committee have always acted upon those principles, and have had before them the results of over 1,000 analyses of samples of sewage effluents, taken under varying circumstances and conditions from the sewage works in the watershed. It is clear from the consideration of these analyses that in order to render the water fit to go into the stream by the removal of the soluble putrescible organic matter, in other words, to prevent secondary decomposition, the amount thereof

MUST BE REDUCED TO THE LIMITS

referred to in the November report of 1894. These limits of impurity are based upon experimental evidence proving that an effluent below or up to them would not putrify when discharged into small streams or into sluggish waters, such as the Manchester Ship Canal, but above them putrefaction would arise, and it may be observed that at all sewage works in the watershed where only chemical treatment is adopted the effluent is almost invariably above, and, on the other hand, where sewage works adopt filtration the effluent is below those limits. The Sub-committee have never laid down a hard and fast line with regard to the use of any particular kind of purification plant, and have accepted effluents from precipitation plant alone where they have proved satisfactory. Precipitation processes, as a rule, can only be relied upon as capable of removing at the utmost two-thirds of the organic matter, whereas in good filtration methods from four-fifths to nine-tenths of the whole can be removed. Before proceedings are directed other chemical details and investigations, in addition to the limits of impurity, are carefully considered. It has been suggested that effluents from precipitation tanks alone should be accepted. To do so would, in the opinion of the Sub-committee, render the work of the Joint Committee futile and its continuance unnecessary. The object for which the Joint Committee was constituted was for the express purpose of cleansing the rivers within its district from their polluted and filthy condition, and if that purpose is to be limited to the removal of the solids in suspension, leaving the soluble putrescible organic matter liable to secondary decomposition present in the effluent, not only will the provisions of the Rivers Pollution Acts be contravened, but the condition of the rivers must for ever remain prejudicial and hurtful to the health and well-being of the inhabitants in the watershead."—Mr. Killick moved the adoption of this supplementary report. He would like, he said, to read a letter he had received from Sir Henry Roscoe. Sir Henry wrote :—"Dear Mr. Killick,—I am glad to learn that the Consulting Sub-committee have prepared a statement with regard to the much-debated question as to the principle upon which we have always acted about limits of impurity. It seems to me to be due to the Sub-committee as *well as to myself* that this should be done and the statement made public. I have not thought it desirable myself to reply to new paper criticism, and therefore I am pleased that the Committee a taking this matter up. I regret that I am unable to be pres to support the recommendations of the Sub-committee, but I do n suppose that they will require anything further in the way of supp from me. I should like to add that Mr. Alderman Snape's remarks the Salford Town Council Meeting, viz., that I had in a letter of advi to the Manchester Corporation 'practically said that it was impossi to comply with the standard of the Joint Committee,' is altogether correct. On the contrary, I have shown from practical experime conducted at the sewage works of the Manchester Corporation t purification can be satisfactorily effected by a process of intermitte artificial filtration. The debatable matter is now entirely one of cos viz. disposal as against purification."

The Chairman said he very much regretted the absence of their ch man, Sir J. T. Hibbert, because he felt in rather an awkward positi in the chair. He could not listen to what had fallen from Mr. Killi and what was embodied in the supplemental report and the letter fr Sir Henry Roscoe without

SOME WORD OF PROTEST.

It was very easy to say that in the case of manufacturers and m towns certain results could be accomplished, but it was a very differ thing when one had to deal with a great city with a population of h a million. It seemed to him that the supplementary report rather c tradicted itself. It stated that a resolution was passed that it was desirable to define the maximum amount of pollution to be allowed, to insist upon the best practicable and available means being used each case. He had always understood that the Committee was satisf if a standard was reached of one grain of oxygen per gallon in f hours. He understood now Mr. Scudder was not satisfied with that

DESIRED A MOVABLE SCALE;

and it appeared from the report now submitted that nothing worse t 1·75 would be considered fair. Each case should be considered on merits, and when a town like Manchester came forward and said it h done everything it could without land filtration or artificial filtrati some regard ought to be shown for what had been done. Sir Hen Roscoe had referred to the experiments at Davyhulme. These expe ments were on a small scale, but it was a remarkable fact that t further they went with them the worse were the results obtained, a towards the end they were certainly not looked upon as very satisfacto The Manchester Corporation were doing their utmost to meet the wis of the Committee, but they seemed to be in a perfect *impasse*. they adopted the solution of sending their effluent into the river Thelwall, it would come within the jurisdiction of the Committee, as he did not know that it would be allowed. It was a very difficul position, and in spite of the most honest efforts he did not see how th requirements of the Committee were to be met.

Dr. Hewitt said the Committee were being attacked on both sides The Ship Canal Company did not think they were taking sufficient strenuous measures, and a Manchester barrister had attacked them through the press for adopting unreasonable standards. Referring to the position of Manchester, he said that by comparison with place where there was a satisfactory effluent—Hindley, for example, wh five acres of filtration land for a population of 19,000:—Manchest ought to have 133 acres of land, whereas it had only 33. The Com mittee must insist upon every place being dealt with alike. H admitted the difficulties of Manchester, but it was mainly a questio of cost.

Mr. Scudder (Sir Henry Roscoe's assistant) said, in reply to question, that the filtration experiments at Davyhulme extended ov a period of three months, and showed that a satisfactory effluent cou be obtained on a basis of 165 gallons per square yard in 24 hour The result of the experiments was that Sir Henry Roscoe made definite recommendation to the Corporation. (Vide page 293.)

Mr. Armitage said the chairman had not told them what were th prospects of the Manchester Corporation doing anything at all. H reminded the chairman that when this matter was under discussion i the City Council he said it would be undignified for Manchester when it came to her turn to have pressure applied, to cry out abo the standard of the Joint Committee.

The Chairman said he would be glad to define exactly the positio of the Corporation with regard to its sewage, but he was ver awkwardly placed. As chairman of the Rivers Committee of th Corporation he was naturally anxious that the scheme of the Rive Committee should be adopted. As deputy chairman of the Joi Committee he naturally wished the schemes of this Committee to b carried out. Then he was a director of the Ship Canal, and at th same time a commissioner of the Upper Mersey Navigation. All h would say was that the Manchester Corporation was honestly doing best to make its effluent as good as possible, and if any member the Joint Committee had anything to advise his suggestion would carefully considered. The Corporation had gone as far as they co

chemical means of purfication, and it was simply impossible for n to get enough land of a suitable kind for filtration.

THE BREAKDOWN AT COVENTRY

heir filtration system, which was regarded as a model for the ıtry, had of late upset all calculations as to the amount of land ssary. A few years ago it was thought that one acre for 10,000 or)0 of the population was enough, but if the effluent desired by the t Committee was to be insisted upon, one acre would not suffice for e than from 500 to 1,000 of the population. It was a very difficult tion, and he was very sorry it had happened to him to be the chair- of the Rivers Committee of the Corporation. It was a matter that l one's thoughts day and night, and so far from getting sympathy the ratepayers, it seemed as if nothing could be said bad enough ıe chairman of the Committee.

he supplementary report of the Consulting Sub-committee was)ted.

Reports of Companies.

DALMENY OIL CO., LIMITED.

n extraordinary general meeting of the members of this company held on Thursday, for the purpose of considering, and, if so lved, to pass as a special resolution, "That it is desirable to re-truct this company, and accordingly that this company be wound voluntarily; and that George Roberts, builder, Edinburgh, and ıibald Burn Murdock, Writer to the Signet, Edinburgh, be, and are hereby appointed liquidators for the purposes of such winding The report by the directors to this meeting is as follows:—The ctors consider it would be of advantage to re-arrange the share tal of the company. To do this it is necessary formally to dissolve present company and to transfer its undertaking to a new company e incorporated. This new company would bear the same name as present company, and practically the only change would be the rangement of the capital. The directors propose that the new pany be incorporated with a share capital of £64,800., consisting -(1) 2700 Preference or A shares of £7. each, entitled to a cumu- e preferential dividend of 5 % per annum, and also ranking prior to Ordinary shares in respect of capital. These shares would thus repre- a sum of £18,900 (2) 5,400 Ordinary or B shares of £8. 10s. , representing £45,900., total £64,800. The share capital of the ent company consists of 2,700 shares of £10. each, on which £7. share has been paid up, representing a paid-up share capital of ,900., and a call liability of £3. per share, £8,100. It is proposed the shareholders of the present company shall, for each share held hem, receive (1) one Preference share of £7. of the new company d as fully paid up, and (2) two Ordinary shares of £8. 10s. each of new company issued with £7. per share paid up, and with a call lity of £1. 10s. per share. The amount of call liability in the company would thus be of the same amount as the call liability in company as now existing The amount at the credit of reserve unt in the last balance sheet of this company is £16,000. Sugges- have from time to time been made to the directors to divide this or most of it, among the shareholders, but the directors have d it important in the commercial interests of the company not to). The proposal now made would give to the shareholders as part eir holding 5 per cent. Preference shares, which they can dispose retain, and which will form an equivalent to a division of the ve account, and at the same time retain to the company the gth which the money at the credit of reserve account gives to The following is an excerpt from proposed memorandum of iation:—The capital of the company is 2,700 shares to be termed erence or A shares of £7. each; and 5,400 shares to be termed nary or B shares at £8. 10s. each, and the same shall have the wing rights and privileges respectively, that is to say:—The A es shall rank prior to the B shares on the profits of each year, half- or other period which it shall be determined to distribute among nembers, for a preferential fixed dividend at the rate of 5 per cent. nnum on the amount paid up on the A shares. The remaining ts to be distributed as aforesaid shall belong to the said B or nary shares. The A shares shall also rank prior to the B shares ne capital of the company and its undertaking for the sums paid n the said A or Preference shares. The company shall have r to increase its capital by the creation and issue of new shares, r Ordinary or having such preference, priority, and special leges attached as the company by special resolution may determine, it may create additional A or Preference shares to rank *pari passu* the said A or Preference shares, but so that the total amount of A or Preference shares ranking *pari passu* shall not together exceed ,000. The company may also reduce its capital. The matter was nder consideration.

STANDARD OIL COMPANY OF GALICIA, LIMITED.

The first ordinary general meeting was held on Monday, at Winchester House, E.C., Mr. J. Berry White presiding. The chairman stated that the company was registered on July 15th, and the subscription list was opened on the 22nd of that month. Capital to the amount of rather over £300,000. was applied for in the United Kingdom and in Holland, but, owing to the system of procedure in the latter country, a delay of ten days took place before the directors could go to allotment, and in this interval applications for about £40,000. were withdrawn. He afterwards alluded to the negotiations which had taken place between the vendor company and the owners of the two properties mentioned in the prospectus belonging to Princess Lubomirska and to Messrs L. and M. Gartenberg. The vendor company—the Petroleum Proprietary, Limited—had been unable to agree to certain terms, and the contract had now expired between the vendors and this company. The question for them to decide at that meeting was whether they would pass a resolution to go into voluntary liquidation, or give the directors a free hand to negotiate direct with Princess Lubomirska for acquiring the petroleum works in Schoanica. They were now quite free, and the capital—about £250,000.—was on deposit at Parr's Bank, bearing interest at the rate of 2½ per cent. per annum. He had no resolution to propose. Dr. T. Cooke stated that he had visited the properties, of the value of which he spoke highly. There would probably be a very large demand in Austria for the oil, the Government of that country having imposed heavy tariff duties upon oil imported. Professor B. Redwood alluded to the development of the petroleum industry in Galicia, and said he anticipated a considerable further increased demand for the article. He believed that petroleum would be used before long in other countries as liquid fuel, as it had been employed for many years in Southern Russia. The chairman, in answer to questions, stated that the withdrawal of the applications for £40,000. of the capital was not owing to any special reason of which he was aware. The directors would endeavour to arrive at a satisfactory arrangement for acquiring the Princess Lubomirska's property if they were left with a free hand to do so—a course which it was understood should be adopted If, the chairman added, they failed to come to a definite conclusion in about a month, they would call the shareholders together again, and lay the position fully before them.

SANTA ELENA NITRATE COMPANY.

The accounts for the year show a loss of £3,788. 0s. 5d. This amount, deducted from the balance of £4,700. 5s. 2d. brought forward from last year, left £912. 4s. 9d. still at the credit of profit and loss account. This result was mainly due to the loss on realisation of stocks of nitrate on hand at the closing of the oficina in July, 1895, in accordance with the decision mentioned in the last report, viz., to close down the works of the company and reduce expenses to a minimum until such time as prices would permit of a fair profit. No nitrate has been made by the company since July, 1895, and although the combination of producers was duly arranged in the spring of this year, prices had, so far, not responded to an extent which would justify the directors in restarting the oficina.

JOHN COCKERILL AND CO.

The report of the great Belgian engineering establishment, the John Cockerill Company of Seraing, for 1895-6 shows a profit balance of £103,335., as against £95,945. for 1894-5 and £127,075. for 1893-4. Including receipts from dividends on investments, unclaimed coupons, and other sources, the gross revenue amounted to £125,711., as against £152,245. for 1894-5. After providing for interest and other charges and appropriations, a net balance of £51,226. is shown, out of which a dividend of 16 per cent. on the reduced capital of £300,000. has been declared, as against a dividend of 10 per cent. on a capital of £600,000. for 1894-5. The report states that the business had the benefit of the improved condition of the engineering industries for only three months of the financial year 1895-6, and adds that against the improvement must be set the enhanced cost of the raw materials and the advance of wages. Meanwhile English competition is severely felt in the rail market. Amongst the ships in process of construction is a mail steamer for the Belgian Government, and three steamers for the new Ostend and Tilbury line. Several vessels have been ordered on Russian account, and this department of the company's business is now assured of full employment throughout the winter. The other departments, noticeably the iron and steel building department, are also busy.

DIVIDEND.

PACIFIC BORAX AND REDWOOD'S CHEMICAL WORKS.—The directors have declared an interim divided at the rate of 6 % per annum for the first six months' working.

THE "DIRECT" SMELTING OF COPPER.

AN interesting paper, dealing with the "direct" method of copper-smelting as the process of the future, for the treatment of copper ores, whether argentiferous or not, was read by Mr. Christopher James, on Wednesday the 21st ult., before the Institute of Mining and Metallurgy. After a brief introduction the author reviewed the Welsh process, taking the various stages of calcining the ore, melting for coarse metal and calcining the same, melting for fine metal, roasting, and finally refining. He next dealt with certain modifications of the Welsh process, notably the treatment of rich slags and the omission of the calcination processes; and also improvements in the process and plant. In regard to the latter he referred at some length to the Baboon furnace; which appears to be a combined melting and calcining furnace, and a storied or double-bedded calciner, which is constructed on much the same principle as the Baboon furnace. An incidental reference was also made to the Gerstenhoer calciner. Touching the improvements in the process itself, chief stress was laid upon the advantages of gaseous fuel, the author pointing out that by the aid of producer gas the regulation of the temperature is more easily and quickly effected, and the production at will of an oxidising or reducing atmosphere should lead to more scientific smelting.

Above all, the use of the gas furnace prevents a very important loss of copper. It must be admitted that some of the contents of a furnace reach the grate and become lost with the ashes. The dust that arises during charging, and the spurting that takes place during melting, and the splashing due to rabbling, all contribute to enrich the ashes of the grate, and, possibly, one who had not systematically assayed the ashes would be loth to believe that they constituted such a very serious source of loss.

The author now proceeded to recount the cycle of operations entailed in the Continental method, the main steps in which are the calcination and fusion of the ore, the calcination of the regulus, and the melting and refining of the black copper; after which he described the water-jacketted furnace and Bessemerising plant, which is characteristic of the American method of smelting, and of which an illustrated account has already been published in these columns (*C.T.J.* 373, p 20).

Having thus reviewed the more familiar processes now in vogue, special attention was paid to the "Direct" process, of which the author is joint inventor and patentee with Mr. T. D. Nicholls and the Cape Copper Company, Limited, who have had the process at work continuously for some years at Briton Ferry.

The method is based on the reaction which occurs between oxide of copper and sulphide of copper when raised to a sufficiently high temperature in contact with one another, whereby the sulphur and oxygen go off as gaseous sulphur dioxide, and the copper is left in the metallic state; the same reaction, in fact, which takes place in the roaster itself. But, whereas, in the roaster, the oxide of copper is being formed *pari passu* with its reaction on the bath of molten sulphide, as is the case in the usual process, in the direct method the requisite amount of oxide of copper to determine the reduction of the whole of the charge has been previously formed, and is present in intimate admixture with the sulphide of copper at the moment when the temperature necessary to effect the reaction has been reached.

The white metal, say a regulus between 70 and 80 per cent. of copper, is first crushed so as to pass through a seive with holes ⅜ inch in diameter, then divided into two portions of about one-third and two-thirds respectively. The two-thirds portion is then calcined, that is, heated in contact with air at a point below fusion, whereby the sulphide of copper is converted into oxide of copper, the sulphur escaping as sulphur dioxide. And this calcined portion is, afterwards mixed with the remaining one-third portion, and the mixture charged into a refining furnace.

Now the point is this:—During calcination the oxidation is effected below the temperature of fusion of the regulus, and during roasting the oxidation is effected above the temperature of fusion of the regulus.

Again, during oxidation intermediate products—compounds of copper—are formed, which are volatile at the temperature of roasting, but are not so at the temperature of calcining. Special attention was invited to this point, and a series of experiments were described which proved that no loss by volatilisation occurs during calcining, while it is well known that during roasting considerable loss of metal takes place through volatilisation. In practice the calcination may be effected in any ordinary form of furnace, but the author prefers to use an American automatic calciner.

The degree to which the calcination is carried is also a matter of choice to a great extent. For if the operation be arrested before perfect oxidation has taken place, we have only to reduce the proportion of uncalcined metal in the mixture. This entails the expense of calcining a larger quantity of white metal, but then on the other hand it is found that the time occupied in pushing the calcination beyond a certain point is proportionately greater, and consequently more costly, than that occupied in bringing the calcination up to that point. The demands of economy seem to be met by calcining two-thirds of the to quantity of white metal, as mentioned above, although if the calcinati were more perfect, less than two-thirds need be calcined, and the c cination is more perfect in the automatic form than in the ordin form of calciner.

When the mixture is being made it is advisable to ascertain with so degree of precision whether the proportions of oxygen and sulp present in the mixture are such as to use up the whole of each to fo sulphur dioxide when the reaction takes place; or at any rate to le only a small percentage of sulphur behind to be got rid of in subsequent refining stage of the operation.

This may be done by melting a sample of the mixture in a Corn crucible A button of copper will be thus obtained, from the appeara of which it can be seen whether the proportions are correct or n Any ordinary intelligent man can learn how to mix the charges afte trial or two.

If too much uncalcined regulus has been added the button will solid and flat, covered more or less with regulus, and if too m calcined regulus has been added the button will be covered with oxide of copper slag.

When the furnace is filled the heat is driven on as fast as possi and as soon as the requisite temperature has been reached the react commences; of course the surface gets hot first, and some pools metallic copper are soon formed, which assist in communicating heat to the interior of the charge in consequence of the better c ductivity of copper. Gradually the reaction will proceed through the charge, and heavy volumes of sulphur dioxide be rapidly evolv This sulphur dioxide is eminently adapted for the manufacture sulphuric acid, as it is quite free from atmospheric nitrogen, and products of combustion from the grate can easily be diverted i another channel while this reaction is going on; for, once the react is started it develops its own heat and for the time no assistance fr the fire is needed.

The reaction being over the fire is again forced till the copper brought to perfect fusion. The slag is now skimmed off and the us refining operation is commenced, precisely as if the furnace had be charged with blister or pimple copper in the ordinary way. The ti occupied in thus preparing the bath of molten copper, and its s sequent refining, is no more than that needed by the ordinary operati of refining a charge of blister copper.

The only variation required by this process is that in order to produ an equivalent weight of copper per charge the furnace must be a li larger than the ordinary refinery, as this charge of mixture occup more room than in the charge of blister copper required to give t same amount of refined copper, although no more fuel will be need than for the smaller furnace.

In summarising the process as a whole, the author claimed th amongst the advantages to be derived from the use of the "direct process, the avoidance of the usual loss of metals in the roaster furna is to be noticed primarily. This is of immense importance wh argentiferous copper materials are smelted, which, for certain reas dependent upon the affinities of copper and silver for oxygen a sulphur, need a prolonged and wasteful roasting. To use his o words:—The main advantage of the "direct" method consists in th the time occupied in the final elimination of sulphur at high temper tures is so short that volatilisation is reduced to a minimum. T moment the sulphide and oxide in the mixture reached the temperatu of volatilisation of any compound that can exist there the reacti occurs, the metals are at once reduced, and all danger is at an end.

In the roaster and in the Bessemer converter the material remains volatilisable temperatures for a considerable time before the re reduction to the metallic state can occur, and it is during this per that the losses take place.

An installation, where roasting is now practised, in order to ob this new process would simply be required to do away with t roaster furnaces, and if the output remains the same, to reduce t number of metal furnaces; but in an installation where Bessemeris plant is now in use, such as the Anaconda Works, in Montana, t change required to be made would be simply this: Arrest the Bes merisation as soon as the molten regulus has reached the white ste pitch, say, at 75 per cent. of copper, for up to that pitch no loss valuable metals takes place, crush this white metal, calcine a portio mix with raw, and charge the mixture into a refinery furnace to ma refined copper, instead of, as at present, continuing the blowing op the metal in the converter until it comes to copper, and charging th copper into the refinery furnace to make refined copper.

Should it be desired, however, to start a new plant, say, for treati such ores as the Anaconda ore, on the best possible lines, then th following arrangement is to be recommended as the best:—

Calcine and melt the bulk of the ore in reverberatory or bl furnaces making coarse metal. Reserve sufficient of the ore, uncalcine for cleaning all the rich slags of the works, and use this reserv portion with the slags in a water-jacketed cupola, again producin coarse metal.

rse metal derived from both these sources is now crushed and automatic calciners, and the calcined product melted in ry furnaces to make white metal, and the white metal is d by the "direct" method, as heretofore described. We a model works, embracing all the best improvements, and of the best experience up to date.

'ILTRATION OF SEWAGE EFFLUENTS.

(*Concluded from page 277.*)

Committee has had, from time to time, analyses submitted to by me on the quality of the effluent water from the land filters, e results, along with a series of analyses made whilst the coke filters were at work (Table H and Diagram 4 omitted) ed, it is obvious that, so far as the chemical results are con- d filtration far excels either the results of the cinder or coke nfortunately, however, the volume of effluent that can be manently on land is limited as compared with the volume filtered by artificial filters.

om these experiments, I have, however, had sufficient ex- lead me to the opinion that the adoption of artificial filters ermittently is a move in the right direction.

litions essential for successful purification by filtration (viz., ion of the organic carbon and of the organic nitrogen in tter of the sewage into inorganic matter) have long been and advocated, but, I am sorry to add, generally ignored in

ers Pollution Commission 26 years ago pointed out that in whether through sand, gravel, chalk, or soil, or a mixture of sand, it was essential that atmospheric oxygen should have d free access to the interior of the filter; that the effluent freely off from the bottom of the filter, so that as the last each dose of sewage water sinks into the filter it may draw c air into the pores of the material from the surface down- he subsequent researches of Messrs. Schloesing and Müntz, and of Professor Warington, in this country, have shown ation as defined above is brought about by the intervention ns. Professor Warington has also pointed out (14 years ewage contains the organisms necessary for its own destruc- nder favourable conditions these may be so cultivated as to urpose, provided the filter is well supplied with air requisite harge of their functions, and also that sufficient lime is present with the nitric acid, otherwise the process of nitrification stopped. The results of the experiments made by the hemists (1891) of the Massachusetts Board of Health confirm tatements, for they state that "the purification of sewage by t filtration depends upon oxygen and time: all other con- secondary. Temperature has only a minor influence: the necessary for purification are sure to establish themselves in re it has long been in use. Imperfect purification for any con- eriod can invariably be traced either to a lack of oxygen in f the filter or to the sewage passing so quickly through that sufficient time for the oxidation processes to take place. ent which keeps all particles of sewage distributed over the and particles, in contact with an excess of air for a sufficient e to give a well-oxidised effluent, and the power of any purify sewage depends almost entirely upon its ability to wage in contact with air. It must hold both sewage and air amounts. Both of these qualities depend upon the physical ics of the material. The ability of a sand to purify sewage, e treatment required for the best results, bear a very close its mechanical composition."

roceeding to make any definite recommendations, I desire to hat when the experiments were ended on March 22nd the mposing the filters were examined, and it was found that ome accumulation of both organic and inorganic matters in extending from the top to the bottom of the filtering material. the filtering materials were placed in stoppered bottles and o a temperature in an incubator favourable to secondary ion, but the materials remained perfectly sweet and only a slight earthy smell. Vegetable moulds appeared, and inated in the materials under these conditions. Moreover, of the cinder material containing oxide of iron in the highest m, the iron was not reduced to a lower oxide, showing that ed matters did not appreciably absorb oxygen. To what accumulation of foreign matters in the filters may go on and working of the filters time alone can determine.

en demonstrated that it is the slime deposit on the sand titutes the real filtering material in the waterworks filter, equent renewal of the filtering media is essential for the the organisms of the water. It must, therefore, not be sup- the artificial filters can continue for an indefinite time with- al of the filtering material, especially the top layer im- elow the gravel. The American chemists have suggested that the clogged upper surfaces can be turned under to a considerable depth, or they can be renewed. If upon turning the surface under its organic matters become oxidised in time, so that it will again serve for a surface layer, then turning under is the better policy; otherwise, removal is the better way.

In conclusion, I would recommend that an artificial area of filter beds composed of cinders should be carried out, which, under skilful management, ought to be able to deal with about 800,000 gallons of tank effluent per acre per day, the depth of filtering material to be 3 ft, and the construction of them to be the same as in the experimental cinder filter, it being, of course, understood that the present area arranged for land filtration shall be continued to be employed, and worked to the best possible extent.

I must, however, insist on the point that in advocating the adoption of a large area of filter beds I only do so on the understanding that they are worked on the principles indicated in the report, for nothing is easier than to clog and render putrid the filters, and thus not only render them useless, but worse than useless. The principles to which I refer to are:—

1st. Perfect æration.
2nd. The equable distribution of the effluent over the whole surface of the filter and downward filtration.
3rd. The retention of all solids (suspended) on the upper surface of the filter, which must be from time to time renewed.
4th. The free flow of the effluent from the bottom of the filter, drawing air into the pores of the material from the surface downwards.
5th. The volume of effluent water applied not to exceed 800,000 gallons per acre per day.

It is, of course, understood that the experiments herein detailed have been obtained with an effluent treated with milk of lime and copperas.

I regret extremely that I have not been permitted to carry on the working of the experiment during a longer period, and especially during a warmer season of the year. Had this been possible, I am of opinion that results of still greater interest and importance, both from a scientific and a practical point of view, would have been obtained.—I am, etc., HENRY E. ROSCOE.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for August, 1896. The total shipments were 88,045,592 gallons, compared with 69,997,133 gallons in August, 1895. The total for the eight months ending August, 1896, was 600,929,859 gallons, against 542,202,342 gallons during the same period in 1895. The details of the shipments are as follow:—

		Gallons.
CRUDE PETROLEUM.		
Total, August,	1896	12,395,601
,, ,,	1895	10,112,224
NAPHTHAS.		
Total, August,	1896	442,400
,, ,,	1895	546,986
ILLUMINATING.		
Total, August,	1896	70,728,601
,, ,,	1895	55,579,800
LUBRICATING AND PARAFFIN.		
Total, August,	1896	4,445,774
,, ,,	1895	3,753,629
RESIDUUM.		
Total, August,	1896	43,176
,, ,,	1895	4,494

NOXIOUS VAPOURS IN MILES PLATTING.—At a meeting of the Newton and District Sanitary Association, held in the People's Institute, Holland-street, Manchester, recently, and presided over by the Rev. S. N. Perry, vice-chairman, the following resolutions were unanimously adopted:—(1) "That we desire to thank the Gas Committee for their courteous reception of the deputation from this Association on the subject of the gas by-products." (2) "That we earnestly ask the Gas Committee to take the necessary steps to enable them to commence such manufacture of by-products at Bradford-road Works as soon as possible, believing that such action by the Corporation would greatly benefit the residents of this neighbourhood, from a health point of view, and believing that by establishing an up-to-date plant in our midst they would be taking the first step towards forcing private manufacturers to carry on their works with the best possible plant, and consequently with the least nuisance to the inhabitants." (3) "That as the nuisance arising from noxious vapours, such as sulphuretted hydrogen, &c, mainly occurs during the night, and on Sundays, we respectfully request the Sanitary Committee to arrange that an inspector shall be available at those times."

ANSWERS TO CORRESPONDENTS.

EUSTACE.—Try the "Chemical Manufacturers' Directory," published by Simpkin, Marshall, Hamilton, and Kent, London, at 9s. 6d.

H.P.—We are executing as fast as possible, and must ask your indulgence a little longer.

R.N., H.F., AND J.P.—See reply to H.P. as above.

CRITIC.—It was welcome, but being so does not affect the wisdom or unwisdom of the suggestion. The fical course was the outcome of a consensus of opinions.

Trade Notes.

DEPRESSION IN THE CHEMICAL TRADE.—Owing to the present depression in the heavy chemical trade, 100 men at the works of Messrs. Brunner, Mond, and Co., Ltd., Winnington, Northwich, were discharged on Thursday. These include journeymen fitters and labourers in the constructive department. All the shift men have been placed on short time, and are losing, on an average, one shift of eight hours every week.

THE SPANISH MANGANESE INDUSTRY.—Increased activity is reported in the exportation of manganese from the province of Huelva. The industry has been growing for the past ten years, and the exports, which in 1895 reached 35,000 tons, have amounted up to the end of September this year to over 44,000 tons from the port of Huelva alone. Owing to this increased activity many mines which had been abandoned have again been placed upon the register.

MESSRS. BLUNDELL, SPENCE AND CO., LTD.—At the board meeting of Messrs. Blundell, Spence and Co., Limited, Hull and London, which was held recently, Mr. Longstaff stated that though retaining his seat on the board and a large interest in the company, he did not desire re-election as chairman. On his proposition Mr. E. Dixon, for some time vice-chairman, was elected chairman. Mr. R. Meggitt, of London, a managing director, was elected to the vice-chairmanship of the board.

OPENING OF NEW ROLLING MILLS.—A new industry has been started at Bathgate—namely, the making of steel sheets. The works, which are to be known as the West Lothian Steel Rolling Mills, are in connection with the West Lothian Shovel Works, and have been erected by the proprietor, Mr. George Wolfe, for the purpose of manufacturing steel sheets for the making of shovels. The works, when in full operation, will employ a considerable number of hands. The rolling mills were supplied by Messrs. J. S. Roberts, Limited, West Bromwich. The works are to be lighted by electricity.

FIRE AT A CREOSOTING WORKS.—About seven o'clock on Friday evening, 30th ult., the large creosote works at the west end of Methil were found to be on fire, and soon were beyond all possibility of extinction. There was a large stock of sleepers, props, and telegraph poles, about the place and these blazed fiercely, but the finest effect was seen when the creosote in the large tank flooded out, and instantly became one sea of fire. It lighted up the sky for many miles. Fortunately the wind was from the north; had it been in any other direction much property would have been in danger. The fire continued all night, and destroyed machinery and everything else about the place. The gates for Methil new dock were being dipped, and these were also wrecked. Most of the stock was covered by insurance.

LEAD POISONING AND DRINKING WATER.—A serious outbreak of lead poisoning has occurred at the Derbyshire village of Mosbro', between Chesterfield and Sheffield, and already there are several cases of paralysis. The gathering ground for the water supply is at High Point, on the Derbyshire moors, and the water acts on the lead pipes owing to the presence of humic and other organic acids present in peaty water. Indignation meetings are being held to force the hands of the local authority, and samples of the water have been sent to the Local Government Board. Dr. Mackintosh, medical officer of health for the Chesterfield Rural District Council, has ordered limestone to be placed at the inlets and outlets of the reservoir, and, if this is not effectual, milk of lime is to be adopted, in the same way as at Sheffield, Ridgeway, Killamarsh, and other places.

A FATAL CASE OF GAS-POISONING.—A distressing fatality occurred at Grangemouth on Saturday last. Two boys and a girl, children of Mr. James Carnie, pilot, residing at Lumley-street, were found to be suffocated in their bed-room from the fumes emitted by a gas-stove. It appears that the bed-room in which the children slept was heated by a gas stove, which was usually turned off at bedtime, but in this instance the usual precaution had been inadvertently omitted. The eldest boy, Rutherford, was found on the floor unconscious, having apparently been vomiting, and may have been attempting to reach the door, but had been suddenly overcome. Doctors Linton and Titterton were in attendance at once, and did everything possible to restore animation, but unfortunately were unsuccessful with two of them—Jemima (aged 13) and Rutherford (aged 11). The third, James, (aged 8), still showed signs of life, and after a period was brought round, but is still in great danger. The occurrence has created intense excitement in the town.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are still qu iet, at 4s. 6d. for 90's, and 3s. 1½d. for 5 In some quarters 90's are even quoted 4s. 3d for prompt, but I not appear probable that there will be any serious decline. C acids are firmer, and 60% crude is now figuring at 1s. 10d.; crystals, 7d. Naphthas are about the same as regards both pric position. Creosote is firm. Pitch flat and slow of sale at 28s. t f.o.b. East Coast.

Sulphate of ammonia seems to have taken a turn for the There is a fairly good business doing. In forward Beckton ha well at £7. 15s. for April-June, and £8. is now being asked. N prompt values are: London outside makes £7. 12s 6d., Liv £7. 7s. 6d. to £7. 10s., Hull £7. 6s 6d to £7. 10s., and £7. 7s. 6d. Nitrate quiet.

MISCELLANEOUS CHEMICAL MARKET.

There has been rather more activity in the alkali market duri week, owing to rumours of an arrangement between the leading facturers in regard to sales of 58% alkali for export. The ma consequently firmer, though nominally quotations are unaltered. prices for caustic soda are as follows—f.o b. Liverpool, 77% 74%, £8.; 70%, £7.; 60%, £6. 5s. per ton, 10-ton lots and up Ammonia alkali steady at £3. 7s. 6d., bags, f.o.r., maker's work price of this article has been advanced for export to the contin £2. 17s. 6d., f.o.b. Soda crystals unchanged at 35s., bags, Chlorate of potash and soda rather firmer, and the demand for ble powder continues more active, and at better prices for prom early shipments; the American demand has already shown s improvement. For contracts over 1897 some special business done on basis of £6. 5., f.o r. Saltcake in better request at 1 20s., f.o.r. Sulphate of copper is firmer at £16. 10s. per ton. potash, caustic, and carbonate the demand is still active, and pri strongly maintained both for prompt and forward delivery. acetate of lime firmer in price, but stocks still heavy; other a quiet. Muriate of ammonia rather easier. Other ammonia sa changed. Aniline oil and salt rather dearer and scarce for p delivery. White powdered arsenic again firmer, and large order been placed at increased prices for early and spring shipments— to £22 10s. now quoted for spot delivery. Crystal carbolic acid at 7d. for 40%.

REPORT ON MANURE MATERIAL.

There has during the week been larger inquiry, and a fair amo business has resulted, buyers realising that they can hardly ho lower prices than those now current. There has been business in mineral phosphates, but buyers generally hesitate to pay the prices now required. There are sellers of 75/80% Florida rock, steamer shipment, at 6¾d. per unit, c.f.r.i. to the Baltic, and would be large buyers at a shade under this figure. For Nort ports, and for the United Kingdom, 6¼d. is the quotation, b these points there is less disposition to buy. The quotation for Carolina River rock and for 58/63% Algerian is 5¼d. per un 1897 summer shipment, and sellers are very firm thereat. In f freights required, considerably more money would have to be pa round for early shipment, shippers finding it sufficiently diffic carry out existing obligations. There is good inquiry for Plate bones, and there would be buyers of handy cargoes at £3 per ton, delivered to good United Kingdom ports, but, in the abs of cargoes offering, no business is reported. £4 per ton is requir crushed Kurrachee bones and bone meal for shipment, but no bu has resulted. Considerable sales of Bombay bone meal have made, both on spot and for shipment, at £3. 17s. 6d. per ton, an is now asked in all positions. Nitrate of soda is firmer all round 8s. per cwt. is required for fine quality on spot. Due cargoes are inquired for, and sales have been made at 7s. 9d per cwt., 7s. 10 being now asked. The quotation for October cargoes is 8s per for November 8s. 1½d., and for December 8s. 3d per cwt.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants o at 48s. 5½d., Middlesbrough 40s. 2d., cash, and hematite 50s. Copper, unsettled: Chili bars, G. O. B.'s and G. M. B's., cost £48. 15s. to £49. cash, and £49. 7s. 6d. to £49. 12s. three months. Tin, easier: Straits closed at £58. £59.. 10s. cash, and £59. 15s. to £60. 5s. three mo

lian, £61.; English ingots, £63. 10s. Lead: Spanish, 5s. to £11. 6s. 3d.; English, £11. 10s. to £11. 12s. 6d. n spelter, ordinary, £17. 3s. 9d. Nickel 1s. 2½d. Antimony, 10s. to £29. Quicksilver: First hands, £6. 12s. 6d.; second £6. 10s. 6d. *Copper shares*, quiet: Cape, $2\frac{5}{16}$ to $2\frac{7}{16}$; o, $2\frac{3}{16}$ to $2\frac{5}{16}$; Libiola, $1\frac{15}{16}$ to $2\frac{1}{16}$; Mason and Barry, $2\frac{7}{8}$; Rio Tinto, $24\frac{7}{16}$ to $24\frac{9}{16}$; Tharsis $5\frac{3}{8}$ to $5\frac{7}{8}$.

ASGOW, WEDNESDAY.—Market firm, wth good business done at 48s. 6d., 48s. 4½d., and 48s. 6d. cash, also at 48s. 9d., l., and 48s. 9d. one month; closing with buyers at 48s. 5½d. sellers ask 48s. 6d. Cleveland done at 40s. 2½d. cash, also at ½d. and 40s. 5d. one month; closing with buyers at 40s. 2d. sellers ask 40s. 3d. Cumberland hematite done at 50s. 6d. lso at 50s. 10d., 50s. 9d, and 50s. 10d. one month; closing uyers at 50s. 6d. cash, sellers ask 50s 7d. Middlesbrough te done at 48s. 2d. and 48s 3d. cash, also at 48s. 6d and l. one month; closing with buyers at 48s. 4d. cash.

IVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

S.—Palm oil has gone very quiet, and there is practically no is to report. Olive is looking up, and likely to be active on t of the big advance in castor oil. Prices are steady and unso far. Linseed is quiet and without change, Liverpool makes rt casks still standing at 17s 9d to 18s. 6d. per cwt. Cotton- being held for last week's prices, namely 16s 9d. to 17s. 3d. erpool refined and 18s. for American. Castor oil is something han firm; the market is disturbed by the stiffness of prices. All s are quoted at 3½d. per lb. Only a small business has been Madras at the price. Tallow is rather firmer, and that is ll that can be said. The scarcity of resin promises to lead to r advance, but this has not resulted up to now. Spirits of ine are very steady, sellers asking 21s. 6d. to 21s. 9d. per cwt. ing business thereat. Petroleum is as last quoted, namely, o 7¾d. for American, and for Russian refined 5¾d. to 5⅞d. lon.

LOURS.—Prices are steady, and practically without change, : Oxfordshire, common, £10., medium, £12., best, £15. hire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, econds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. ad unchanged. Venetian red, £6. to £10. Cobalt: Preoxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Commor, iedium, £10.; finest. £20. Zinc oxide, £22. 10s. to £25.

JLL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

S.—The outlook for business appears brighter; still, as might een anticipated, the sudden advance in rates of cotton and oils current during the past two weeks could not be upheld. rincipal imports into Hull up to date have been:—Linseed, quarters, against 529,618 quarters a year ago; rapeseed, 74,223 s, against 127,758 quarters; cottonseed, 138,192 tons, against tons; olive oil, 15,349 casks, against 11,090 casks; rape oil, asks, against 6,6558 casks; oilcake, 10,468 tons, against 12,241 tallow, 64,919 cwts., against 11,468 cwts.; bones, 5,101 tons, 3,144 tons; turpentine, 15,323 barrels, against 14,636 barrels. has declined about 12s. 6d. per ton, closing steady at ½d., naked spot; November-December, 15s. 6d. to 15s. 7½d.; uary-April, 16s.; May-August quoted 16s. 6d. Boiled and £1. to £2 per ton extra. Export for the week has been wts. Refined cotton oil about 15s. per ton lower, closing with at 14s. 4½d. naked spot; November-April, 14s. 7½d. buyers. £1., and ordinary barrels 30s. per ton extra. Export for the as been 9,400 cwts First pressure castor oil from 3¼d. per lb il unchanged. Cod oils, £16. to £18. per ton. Turpentine ged. Bone grease is realising £17. to £17. 10s per ton. , 94% to 97% saponifiable: White, £19. 5s.; pale, £17. 15s; £16 15s. per ton, c.i.f. Hull. Olive oil soap (Italian), 60%, r ton, c.i.f. Hull Yorkshire grease, £8. per ton

ES.—Linseed cakes steady; 95% pure, £6. 7s 6d.; oil- £5. 7s. 6d. Cotton cakes quiet but steady: Best makes, to £4. 7s. 6d.; seconds, £4. 2s. 6d.; for April, £3. 17s. 6d. d, but buyers hold off in view of easier grain markets with tive heavy arrivals.

NTS.—The trade for home demand is very limited; the export ngages all attention just now. Prices are:- White and red lso oxide of zinc, unchanged; ready-mixed paints, in tins, £24. ; black, blue, green, Venetian, and oxide paints, ground in oil, 11. per ton; Imperial black varnish, £5. 5s, in barrels; paint r, 25s. to 30s. per cwt.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

The market for the ordinary chemicals retains its tone of quietness generally speaking, about the only exception being sulphate of copper, which is in demand, and has advanced 5s. on a range of from £16. 5s. to £16. 10s., less 5 % Liverpool. Sulphur is still scarce, and readily commands late prices. Alkali likewise keeps good hold of the recent firmer feeling. With these exceptions the tone is rather downward if anything, chlorate of potash, nitrate of soda, and bleaching powder being all a shade easier. In sulphate of ammonia there have been some slight signs of recovery, present prompt price being £7. 2s. 6d. Leith, and over November delivery £7. 3s. 9d., actual business having been done at these figures. Makers sincerely hope that bottom has been touched at last, but as yet buyers are not coming forward *re* spring deliveries with any offers producers can take. Mineral oils and paraffins are unchanged, the lubricants being still strong and the others indifferent.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 48/52°, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 5s., 60/62° £6. 5s., and cream 60/62° £6., all nett, Liverpool; bleaching powder, £6. 12s. 6d. nett, Tyne; saltcake, 19s.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4d. less 5%, any port; nitrate of soda, 7s. 9d. to 8s.; sulphate of ammonia, £7. 2s. 6d. prompt, f.o.b., Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 5s. to £16. 10s. less 5%, Liverpool; paraffin scale, hard, $1\frac{7}{16}$d. to 1¾d., and soft, 1½d. to 1⅞d. per lb.; paraffin wax, 120° semi-refined, $1\frac{13}{16}$d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. Week's imports of sugar at Greenock were 13,042 baskets cane unrefined, and 5,000 bags crystal.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals still continue very dull, and there is practically no alteration in prices. Soda crystals, £2. 2s. 6d. per ton, gross weight locally. Sulphur scarce, at £4. 15s. per ton. Caustic 76/77%, £9. 5s.; 70%, £7. 10s. per ton. With the approach of winter shipments are likely to show a falling off.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. to £5. per ton, nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s. 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham Salt is steady at 9s. per ton, f.o.b. Tees.

COALS.—The coal trade is fairly steady and there is a better demand for steam and bunker qualities. Gas coals are also firm and in increasing consumption. To-day's prices:—Best Northumbrian steam, 7s. 9d. to 8s. per ton; second qualities, 6s 9d. to 7s. per ton.; small steam, 3s. 9d. to 4s. per ton. Bunker coals, 6s. 6d. to 7s. Gas coals, 6s. 9d. to 7s. per ton. Household coals, 10s. to 11s. per ton. Coke firm at 14s. to 15s. per ton.

New Companies.

Austrian Rhea Ramie Syndicate, Ltd.—CAPITAL £10,000, in shares of £10. each. This company has been formed to acquire certain Austrian and other patents for the treatment of China grass, etc. The

subscribers to the memorandum of association are:—J. F. Stanley, Earl Russell, Amberley Cottage, Maidenhead; St. G. L. Fox, 34, Victoria-street, S.W., engineer; W. J. Grove, J.J., Berwick St. John, Salisbury; C. L. Tuckey, M.D., 88, Park-street, Grosvenor-square, W.; T. N. Hester, 34, Victoria-street, S.W., secretary; F. Levett, 72, Albany-street, Regent's Park, N.W., writer; H. E. Habin, 7, Bessborough Gardens, S.W., clerk.

Wm. Robinson and Co., Ltd—CAPITAL £70,000., in £1. shares. This company has been formed to take over the business of enamelled hollow-ware factors, machinists, cycle and motor car makers, now carried on at Wolverhampton. The subscribers to the memorandum of association are:—W. Robinson, Hollies, Penn Fields, Wolverhampton, manager; T. Skidmore, Parkdale, Wolverhampton, auctioneer; T. Jeffery, Albrighton, Salop, manager; J. C. Turton, Hollies, Penn-road, Wolverhampton, gentleman; J. Rushton, 15, Laughan Place, Northampton, gentleman; W. E. Jeffery, 38, Compton-road, Wolverhampton, secretary; T. Hunt, Penn Fields, Wolverhampton, solicitor.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 24th.

Acetic Acid—

Holland,	56 brls.	Little & Johnston
,,	20 cks.	H. Wallace & Co.
,,	316 pks.	A. & M. Zimmermann

Acetone—

Holland,	11 dms.	T. H. Lee
Germany,	1	Stein Brs.

Alkali—

Belgium,	40 c.	A. & M. Zimmermann

Alum—

Belgium,	12 cks.	H. Wallace & Co.
Germany,	13	Ohlenschlager Brs.
Holland,	240 pks.	,,

Antimony Ore—

N. Zealand,	1 t.	Major & Field

Asbestos—

N. Russia,	£16	M. D. Co.
Italy,	720	L. & I. D Jt. Co.
Germany,	11	Craven & Co.
Italy,	7	B. Rhodes & Son

Barium Chlorate—

Germany,	23 cks.	Petri Brs.

Barytes—

Belgium,	119 brls.	J. L. Lyon & Co.
Holland,	69 cks.	R. Bew
,,	40	O'Hara & Hoar
Germany,	44	W. Harrison & Co.
Holland,	19	E. J. Diggins
,,	91	J. L. Lyon & Co.
Belgium,	78	W. Harrison & Co.
Holland,	110	T. & W. Farmiloe
,,	44	W. Harrison & Co.

Camphor—

Germany,	7 cs.	City Coml. Wf. Co.

Caoutchouc—

Madagascar,	4 c.	Prop. Bull Wf.
,,	14	Blyth, Greene & Co.
Zanzibar,	217	L. & I. D. Jt. Co.
Belgium,	5 cs.	Société John Cockerill
Madagascar,	12	S. Figgis & Co.
B. Honduras,	3	Gonzalez, Byass & Co.
Zanzibar,	1	Clarke & Smith
Aden,	9	S. Figgis & Co.
Penang,	462	E. Boustead & Co.
Rangoon,	133	L. & I. D. Jt. Co.
U. States,	31	Stiebel Brs.

Carbolic Acid—

Germany,	63 cks.	Blagden, Waugh & Co.

Castor Oil—

Italy,	3 cs.	Kearley & Tonge
Ceylon,	31 cks.	Ross & Deering
Brindisi,	5	City Coml. Wf. Co., Ltd.

Caustic Potash—

France,	40 drs.	J. Knight & Sons

Chemicals *(otherwise undescribed)*

Holland,	£28	Typke & King
,,	10	T. H. Lee
Germany,	19	L. & I. D. Jt. Co.
,,	17	Phillipps & Graves
,,	265	A. & M. Zimmermann
Belgium,	60	Leach & Co.
U. States,	2,750	L. & I. D. Jt. Co.
Holland,	23	J. Barber & Co.
,,	12	F. Boehm
,,	5	L. C. & D. Rly.
France,	144	Mory & Co.
Portugal,	4	Leverkus, Harms & Co.
Japan,	150	Dakin Brs.
Germany,	23	H. Lambert
Belgium,	66	Société John Cockerill
Holland,	8	Standard Ammonia Co.
Germany,	327	T. H. Lee

Cream of Tartar—

Spain,	5 cks.	W. C. Bacon & Co.
France,	16	,,
,,	5	M. Ashby, Ltd.
,,	5	B. & F. Wf. Co.
,,	2	McNamara & Co.
,,	25 kgs.	Finlay & Co.

Dextrine—

Germany,	50 bgs.	Patent Gum Co.

Dyestuffs—

Aniline

Holland,	1 pk.	R. Baelz & Co.

Argols

Spain,	363 bgs.	A. G. Boyes
Italy,	104	Thames S. Tug & L. Co., Ld.
France,	162	

Cochineal

Canaries,	16 bgs.	G. S. Bruce
,,	47	Knowles & Foster
,,	13	Kuhner, Henderson & Co.
,,	4	Sperling & Williams
,,	7	J. W. Borland
,,	18	W. M. Smith & Sons
,,	10	Patry & Pasteur

Cutch

Rangoon,	950 bxs.	A. Howden & Co.
Singapore,	50	J. Swire & Sons
Ceylon,	60 cs.	Cayzer, Irvine & Co.

Divi Divi

E. Indies,	22 bgs.	Flack, Chandler & Co.

Extracts

Holland,	1 brl.	Loder, Son & Co.
France,	100 cks.	L. J. Levinstein & Sons
,,	30	Union L. Co.
U. States,	50 bxs.	Skilbeck Brs.
Holland,	5 brls.	R. Baelz & Co.

Gambier

Singapore,	256 bls.	P. & O. Co.
,,	143	Union L. Co.
,,	458	Brinkmann & Co.
,,	462 bgs.	Beresford & Co.
,,	182	G. R. Haller

Indigo

E. Indies,	18 chts.	L. & I. D. Jt. Co.
,,	3	Laughland, Mackay & Co.
,,	6	Walker, Munsie & Co.
,,	13	Parry & Co.
,,	6	Park Macfadyen & Co.
,,	4	J. Hatton Hall & Co.

Logwood

B.W. Indies,	22 t.	F. Macfadyen & Co.

Myrabolams

E. Indies,	472 pks.	A. B. Curtis & Co.
,,	2,701	P. & O. Co.

Tanners' Bark

Natal,	5 t.	J. T. Rennie, Son & Co.

Turmeric

Germany,	316 bgs.	Leach & Co.

Valonia

A. Turkey,	10 c.	L. & I. D. Jt. Co.

Dyestuffs *(otherwise undescribed)*

France,	1 cs.	Hernu, Peron, & Co.

Farina—

Holland,	50 bgs.	J. Knill & Co.
,,	50	J. Barber & Co.
France,	50	Bennett S. S. Co.
Germany,	10	,,

Glucose—

U. States,	150 pks.	825 c.	Duche & Sons
,,	1,150	1,150	R. G. Hall & Co.
,,	250	250	Trier, Meyer, & Co.
,,	700	1,700	Bellamy & Co.
,,	100	100	L. & I. D. Jt. Co.
France,	650	650	W. C. Cole
U. States,	1,000	1,000	Pearce, Pelly, & Co.
,,	500	300	Fellows, Morton, & Co.
,,	50	285	Robinson, Son, & Co.

Glue—

France,	£24	Bennett S. S. Co.
Germany,	65	Phillipps & Graves
Belgium,	156	J. Barber & Co.
Germany,	30	L. & I. D. Jt. Co.
Holland,	14	T. H. Lee
Germany,	80	Rosenberg, Loewe, & Co.
France,	150	W. J. Davis & Sons
Holland,	28	Phillipps & Graves
,,	40	G. Rahn & Co.
,,	14	H. Johnson & Sons

Lamp Black—

U. States,	208 brls.	Steinhoff, Sons, & Co.

Lead Acetate—

France,	12 cks.	F. Smith

Litharge—

Holland,	4 cks.	J. Barber & Co.

Manganese—

Germany,	2 t.	Pickford & Co.
,,	2	T. H. Lee

Manganese Chloride—

Holland,	13 cks.	Petri Brs.

Manganese Ore—

Japan,	260 t.	J. Woak

Manure—

Brisbane,	92 t.	L. & I. D. Jt. Co.
Germany,	20	D. de Pass & Co.
France,	50	Burnett Brs. & Sons
Wellington,	20	Deering & Robottom
E. Indies,	375	A. Hunter & Co.
Belgium,	115	West & Penrose
N. Zealand,	20	Deering & Robottom

Methyl Alcohol—

Germany,	2 dms.	H. Lorenz
U. States,	40 brls.	Stein Brs.
Sweden,	10 cks.	,,
Germany,	12 dms.	,,

Mica—

E. Indies,	£264	E. Davis & Co.
,,	30	Arbuthnot, Latham, & Co.
,,	834	W. M. Smith & Sons
U. States,	9	L. & I. D. Jt. Co.
E. Indies,	60	R. G. Shaw & Co.

Ochre—

France,	122 cks.	W. Harrison & Co.
,,	60	Burrell & Co.
,,	21	J. L. Lyon & Co.
,,	10 pks.	H. Johnson & Sons
Holland,	18	Phillipps & Graves
	1 ck.	

Paint—

U. States,	3 cs.	Pickford & Co
Germany,	1	T. H. Lee

Phosphate Rock—

France,	200 t.	Anglo-Contl. G. Wks.

Pitch—

U. States,	451 bgs.	H. Hill & Sons
Belgium,	12 brls.	Poth, Hille, & Co.

Plumbago—

Germany,	170 cks.	E. & T. Fish
E. Indies,	56 pks.	R. G. Hall & Co.
Ceylon,	106 cks.	,,
,,	169	J. Threlfall, Son, & Co.
	208 pks.	

Potassium Bicarbonate—

Germany,	10 kgs.	R. W. Greeff & Co.

Potassium Carbonate—

Germany,	580 c.	W. G. Blagden
Holland,	85	J. Owen

Potassium Chloride—

Germany,	500 bgs.	Anglo-Contl. G. Wks.

Saltpetre—

Germany,	23 cks.	J. Hall, Son, & Co.
Belgium,	483 bgs.	Lucas & Spencer's Wf.
E. Indies,	558	Perkins & Hoare
,,	285	Lucas & Spencer's Wf.
Germany,	82 cks.	Petri Brs.

Soda—

France,	220 c.	Petri Brs.
Belgium,	2,400	R. Waters

Sodium (Metal)—

Belgium,	23 cs.	A. C. Lloyd

Starch—

Holland,	1,000 cs.	Vokins & Co.
,,	40	J. Barber & Co.
France,	140	,,
Holland,	30	Phillipps & Graves
Belgium,	240	Leach & Co.
Holland,	50	G. Rahn & Co.
,,	240	T. H. Lee
Germany,	2,730	Horne & Co.
France,	10	B. & F. Wf. Co.
Holland,	205	Little & Johnson
U. States,	110 brls.	Beck & Fellner
Belgium,	706 cs.	F. Clayton & Co.
,,	180	J. Harrison
U. States,	11 bgs.	Marshall & French
France,	30 cs.	J. Travers & Son

Stearine—

Holland,	51 bls.	17 cks. J. Owen
France,	80 bgs.	H. Wallams & Tuttl
Holland,	136	H. Hill & Son
Belgium,	86	,,

Sulphate—

Belgium,	35 brls.	Union Whs. Co.

Talc—

France,	£50	G. G. Blackwell, Sons, & Co.

Tartaric Acid—

Holland,	2 cks.	F. C. Dewes & Co.
,,	26	B. & F. Wf. Co.
,,	4	Kirkpatrick & Co.

Ultramarine—

Germany,	8 cks.	D. Storer & Son
,,	8	Blundell, Spence, & Co.
Holland,	12 cs.	Haeffner, Hilpert, & Co.
Belgium,	24 cks.	J. Harrison
,,		4 brls. Leach & Co.
Holland,	1	J. Barber & Co.

Varnish—

Germany,	4 pks.	L. & I. D. Jt. Co.

Verdigris—

France,	2 cks.	Burrell & Co.

White Lead—

Holland,	16 cks.	W. H. Mitchell
Germany,	37	F. G. Clifford
,,	10	Haeffner, Hilpert, & Co.
Belgium,	101	T. & W. Farmiloe
Germany,	310	D. Storer & Son
,,	49	Taylor Brs.

d Pulp—
den, 90 pks. Henderson, Craig, & Co.
,, 800 W. G. Taylor & Co.
rway, 320 ,,
,, 2,800 Moreton Cox, Brs.
,, 150 Tough & Henderson
,, 266 W. E. Bott & Co.
land, 270 Phillipps & Graves
,, 810 Raby & Mather
den, 2,046 Moreton Cox Brs.
rway, 1,016 Johnsen & Jorgensen
land, 3 536 Henderson, Craig, & Co.
den, 400 pks. Raby & Mather
rway, 180 Becker & Co.
many, 60 Thames S. T. & L. Co.
land, 25 J. Barber & Co.
gium, 1,944 E. J. & W. Goldsmith
way, 176 Christophersen & Co.
Ashes—
ndies, 19 t. G. H. Wilson & Sons
Oxide—
many, 50 cks. D. Storer & Sons
land, 50 pks. Prprs. Dowgate Dk.

IVERPOOL.

Week ending October 22nd.

i—
tandria, 8 brls.
stos—
que, 3 cs. Mitrovick Brs.
tes—
werp, 44 cks. 468 bgs.
terdam, 54
Meal—
achi, 2,000 bgs.
cic Acid—
horn, 83 cks.
te of Lime—
lendo, 800 bgs. A. S. Henry & Co.
tchouc—
re, qty. Cunard S. S. Co., Ld.
araiso, 23 bls. Kleinwort, Sons, & Co.
r Oil—
utta, 2,119 cs.
Oil—
on, 10 cks. Clayton, Jones & Knox
rs—
nt, 176 brls.
terdam, 21 cks.
m of Tartar—
celona, 15 cks.
agona, 5 Sachse & Klemm
tuffs—
chineal
Canary, 4 pks. Canary Isld. Trading Co.
,, 8 T. May & Co.
,, 10 Sperling & Williams
,, 14 Swanston & Co.
itch
apore, 785 bxs.
goon, 1,000
vi Divi
aburg, 865 bgs.
ttracts
aburg, 71 bxs. 176 cks.
astic
pico, 2,665 ps.
ambier
apore, 1,776 bls. 614 bgs.
digo
achi, 133 cs.
affron
ncia, 1 cs.
umac
rmo, 530 bgs.
ose—
York, 298 brls. T. M. Duche & Sons
,, 150
on, 50
—
on, 1 brl. Escombe Brs. & Co.
erdam, 5 cs.
a, 25
Acetate—
burg, 20 cks.
stone—
werp, 1 crt. 3 cs. J. T. Fletcher & Co.
4

Litharge—
Rotterdam, 6 cks.
Manganese Ore—
Stratoni, 2,618 t. Darwen & Mostyn Iron Co.
Mica—
Norfolk, Va., 8 cs.
Minium—
Rotterdam, 20 cks.
Molasses—
Alexandria, 897 brls.
Paint—
Boston, 50 cs. Bahr, Behrend & Ross
Paraffin Scale—
Baltimore, 100 brls.
Pitch—
Hamburg, 1 brl.
Plumbago—
Hamburg, 32 brls.
Potashes—
Antwerp, 16 dms.
Montreal, 25 brls.
Pumice Stone—
Messina, 5 bgs.
Pyrites—
Huelva, 3,737 t. T. Mathieson & Co.
,, 1,183
Rosin—
Baltimore, 250 brls.
Salt—
Hamburg, 295 cks. H. Tyrer & Co.
Saltpetre—
Calcutta, 694 bgs. Ralli Brs.
,, 2,552
Soap—
Boston 2 cs. J. Thompson
N. Orleans, 473 brls.
Leghorn, 250 bxs. Weaver & Sterry
,, 1
Bari, 104
Soapstone—
Bordeaux, 100 bgs. G. G. Blackwell, Sons & Co.
Genoa, 100 W. Harrison & Co.
Starch—
Baltimore, 600 sks.
Boston, 20 cs. J. Armstrong & Co. Ld.
,, 1,000 110 brls.
Antwerp, 160
Rotterdam, 273
Antwerp, 125 J. T. Fletcher & Co.
Lisbon, 10 bgs. Fielding & Co.
Ghent, 560 cs. J. T. Fletcher & Co.
Stearine—
Baltimore, 150 tcs.
Antwerp, 39 bgs. J. T. Fletcher & Co.
,, 54
Sulphur—
Catania, 20 brls. 100 bgs.
Sulphur Ore—
Pomaron, 10 t. Mason & Barry, Ld.
Sulphuric Acid—
Hamburg, 1 dm.
Talc—
Norfolk, Va., 23 cs.
Tallow—
New York, 100 hds.
Boston, 250 tcs. 300 brls.
Baltimore, 330
New York, 36 Colby & Co.
Montreal, 50
Boston, 255 tcs. Bigland, Son & Co.
Tartar—
Hamburg, 12 cks.
Bordeaux, 24
Vigo, 41 bgs. Hawkes, Somerville & Co.
Ultramarine—
Rotterdam, 20 cks.
Varnish—
Rotterdam, 1 ck.
White Lead—
Ghent, 16 brls. J. T. Fletcher & Co.
Antwerp, 22 cks. ,,
,, 26
Rotterdam, 21
Ghent, 28

Wood Pulp—
Hamburg, 400 bls.
Gothenburg, 24 Bahr & Co.
,, 103 R. L. Lundgren
Rotterdam, 210
Boston, 318 rolls
Zinc Ashes—
Boston, 101 brls.
Zinc Oxide—
New York, 200 brls.
Antwerp, 172
Zinc White—
Rotterdam, 10 cks

MANCHESTER.

Week ending October 24th.

Acetate of Lime—
New York, 475 bgs.
Acetic Acid—
Gothenburg, 10 blns.
Alum—
Rotterdam, 15 cks.
Antimony Salt—
Rotterdam, 12 cks.
Barytes—
Rotterdam, 24 cks. 100 bgs.
Chemicals *(otherwise undescribed)*
Rotterdam, 10 cs.
Colours—
Rotterdam, 11 cks. 11 cs. 7 bxs. 41 brls.
Hamburg, 2 2
Ghent, 4
Antwerp, 4 J. T. Fletcher & Co.
Cottonseed Oil—
Alexandria, 2 cks.
Cream of Tartar—
Rotterdam, 3 cks. 15 kgs.
Creosote Salt—
Hamburg, 2 cks.
Dimethylaniline—
Rotterdam, 1 ck.
Dried Blood—
Ghent, 20 cs.
Dyestuffs—
Extracts
New York, 44 brls. Hervey, Peek, & Co.
Dyestuffs *(otherwise undescribed)*
Rouen, 5 cks.
Farina—
Hamburg, 50 bgs.
Stettin, 50 Stott, Coker, & Co.
,, 1,630 Browne, Geveke, & Co.
,, 500
Glucose—
New York, 50 brls.
Stettin, 200 bgs.
New York, 200 brls. T. M. Duche & Sons
Glue—
Rotterdam, 2 cs. 40 bgs.
Stettin, 20
Antwerp, 1 brl.
Rouen, 16 cks. 44
Limestone—
Antwerp, 2 cs. 8 crts.
Litharge—
Rotterdam, 15 cks.
Lithopone—
Stettin, 33 cks Stott, Coker, & Co.
Mineral White—
Bordeaux, 100 bgs. G. G. Blackwell, Sons, & Co.
Paranitraniline—
Rotterdam, 1 ck.
Paraffin Scale—
New York, 450 brls. Thompson & Bedford
Pitch—
Rotterdam, 25 cks.
Potash—
Hamburg, 39 cks.
Stettin, 1 Stott, Coker, & Co.
Potassium Chloride—
Hamburg, 31 dms.
Saltpetre—
Hamburg, 9 cks.
Soap—
Rotterdam, 3 cs.
Sodium Nitrate—
Rotterdam, 4 cks.
Starch—
New York, 800 sks.
Hamburg, 148 cs.
Rotterdam, 10
Stearine—
New York, 18 hds. Co-op. W'sale Society
Tallow—
Rouen 143 bgs.
New York, 150 tcs. Co-op. W'sale Society
Tartar—
Bordeaux, 3 cks. J. & P. Hutchison
Tartaric Acid—
Rotterdam, 2 cks.
Treacle—
Nantes, qty.
Waste Salt—
Hamburg, 100 bgs. and a q
White Lead—
Rotterdam, 9 cks.
Wood Pulp—
Gothenburg, 1,967 bls.
Helsingfors, 800
Kotka, 232
Zinc Oxide—
Rotterdam, 45 brls.

HULL.

Week ending October 24th.

Albumen—
St. Petersburg, 80 cs.
Riga, 4 Helmsing & Son
Aluminium—
Hamburg, 1 ck.
Barytes—
Antwerp, 70 cks. Bailey & 70 bgs. Leetham
Bremen, 26 cks.
Amsterdam, 8 Hutchinson & Son
Rotterdam, 46 W. & C. L. Ringrose
Bone Meal—
Kurrachee 4,000 bgs.
Carbolic Acid—
Christiania, 1 brl. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
Danzig, 17 cks. Wilson, Sons, & Co., Ld.
New York, 4 cs. ,,
Bremen, 1 ck. Veltmann & Co.
Cod Oil—
Aalesund, 30 brls. Wilson, Sons, & Co., Ld.
Colours—
Danzig, 10 pks.
Rotterdam, 67 cks. 46 cs. 112 10 brls. W. & C. L. Ringrose
Riga, 2 210 cs. 408 pks. Wilson, Sons, & Co., Ld.
Antwerp, 43 pks. ,,
Bremen, 2 cks. Greaves & Co.
Amsterdam, 1 Hutchinson & Son
Cryolite—
Copenhagen, 114 cks. Wilson, Sons, & Co., Ld.
Dextrine—
Stettin, 50 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 74 cks. W. & C. L. 2 bxs. Ringrose
Indigo
Rotterdam, 3 chts. J. Pyefinch & Co.
Myrabolams
Bombay, 3,885 bgs.
Valonia
Smyrna, 760 t.
Dyestuffs *(otherwise undescribed)*
Hamburg, 1 cs. Wilson, Sons, & Co., Ld.
Farina—
Stettin, 100 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 750 bls. Hutchinson & Son
Dunkirk, 70 bgs. Wilson, Sons, & Co., Ld.
Glucose—
New York, 250 bgs. 50 brls.
Rotterdam, 50 Hutchinson & Son
Glue—
Antwerp, 6 cks.
Hamburg, 194 bls. Wilson, Sons, & Co., Ld.
Rouen, 2 cks. 5 cs. Rawson & 11 bls. Robinson
Dunkirk, 6 cks. Wilson, Sons, & Co., Ld.

Mineral White—
Stettin, 13 cks. Wilson, Sons, & Co., Ld.

Nickel Salt—
Rotterdam, 4 cks. Hutchinson & Son

Paint—
New York, 9 cs. Wilson, Sons, & Co., Ld.

Phosphate—
Ghent, 180 t. Wilson, Sons, & Co., Ld.

Potash—
Antwerp, 24 pks. Wilson, Sons, & Co., Ld.
Dunkirk, 20 cks. "

Potassium Chlorate—
Stockholm, 20 kgs. H. Biggs, Sons, & Co.

Rosin—
Bordeaux, 6 cks.

Salt—
Hamburg, 602 bgs. Furley & Co.

Saltpetre—
Hamburg, 58 pks. Wilson, Sons, & Co., Ld.
Antwerp, 135 "

Soda—
Rotterdam, 11 brls. W. & C. L. Ringrose

Starch—
Antwerp, 80 cs. Bailey & Leetham
Bremen, 1,303 Veltmann & Co.
Amsterdam, 48 Hutchinson & Son
Hamburg, 1 1 bg. Wilson, Sons, & Co., Ld.
Ghent, 402 "
Rotterdam, 60 W. & C. L. Ringrose

Tallow—
New York, 103 bds. Wilson, Sons, & Co., Ld.

Tartar—
Bordeaux, 6 cks. Rawson & Robinson

Tartaric Acid—
Rotterdam, 4 cks. Hutchinson & Son

Treacle—
New York, 698 brls. Wilson, Sons, & Co., Ld.

Turpentine—
Bordeaux, 20 cks. Rawson & Robinson

Ultramarine—
Rotterdam, 2 cks. Hutchinson & Son

Varnish—
New York, 59 pks. Wilson, Sons, & Co., Ld.
Hamburg, 2 dms. "

Wood Pulp—
Gothenburg, 1,162 bls. Wilson, Sons, & Co., Ld.
Drontheim, 1,040 "
Bergen, 379 pks. "
Hamburg, 400 Bailey & Leetham
Christiania, 2,557 bls. Wilson, Sons, & Co. Ld.
Helsingfors, 716 J. Good & Sons

Zinc Oxide—
Antwerp, 5 cks. Bailey & Leetham
Rotterdam, 15 cs. Hutchinson & Son

GLASGOW.

Week ending October 29th.

Acetic Acid—
Rotterdam, 8 cks. J. Rankine & Son

Aniline—
Rotterdam, 21 cks. 14 cs. J. Rankine & Son
Hamburg, 2
Amsterdam, 1 "

Arachide Oil—
Rotterdam, 4 cks. J. Rankine & Son

Asbestos—
Quebec, 960 bgs.

Barium Chlorate—
Rotterdam, 8 cks. J. Rankine & Son

Barytes—
Rotterdam, 22 cks. 22 pks. J. Rankine & Son

Chemicals (*otherwise undescribed*)
Rotterdam, 1 ck. 3 cs. J. Rankine & Son

Colours—
Rotterdam, 46 pks. 3 cks. 6 cs. 1 bx. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 14 pks. J. Rankine & Son
Extracts
Philadelphia, 50 brls.

French Chalk—
Fiume, 200 bgs. P. M'Intosh & Sons

Glucose—
New York, 300 brls.

Glue—
Rotterdam, 20 bgs. J. Rankine & Son
Fiume, 100 bls.
Nantes, 60
Hamburg, 80
Rouen, 10 cks.
New York, 96

Lead Acetate—
Hamburg, 13 cks.

Ochre—
Rouen, 1 cs.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paraffin Scale—
Philadelphia, 250 brls.

Potassium Chlorate—
Rouen, 16 cks.

Rosin—
New York, 500 brls.

Soap—
Fiume, 81 cs. G. & J. Boyd
" 73

Starch—
Montreal, 30 bxs.
Fiume, 10 bgs.
Philadelphia, 200
New York, 400
Rotterdam, 80 cs. J. Rankine & Son
Amsterdam, 40 bxs. J. Rankine & Son

Stearine—
Amsterdam, 122 bgs.

Tartar—
Bordeaux, 41 cks.

Tin Salt—
Rotterdam, 16 cks. J. Rankine & Son

Treacle—
Philadelphia, 250 brls. Waddell & Bryson

Ultramarine—
Rotterdam, 4 cks. J. Rankine & Son

Varnish—
New York, 3 brls.

White Lead—
Rotterdam, 118 cks. J. Rankine & Son

Wood Pulp—
Fiume, 204 bls.
Christiania, 2,360 23 cs.

Zinc Oxide—
New York, 100 brls.
Rotterdam, 25 cks. J. Rankine & Son

Zinc Sulphate—
Rotterdam, 3 brls. J. Rankine & Son

Zinc White—
Rotterdam, 35 cks. J. Rankine & Son

TYNE.

Week ending October 24th.

Acetic Acid—
Rotterdam, 5 cks. Tyne S. S. Co.

Alizarine—
Rotterdam, 2 brls. Tyne S. S. Co.

Asbestos—
Hamburg, 1 cs. Tyne S. S. Co.

Barium Chloride—
Rotterdam, 950 bgs. Tyne S. S. Co

Chemicals (*otherwise undescribed*)
Copenhagen, 1 cs.

Cod Oil—
Bergen, 1 bx.

Colours—
Hamburg, 1 cs. 3 cks. Tyne S. S. Co.
Rotterdam, 3 bxs. "

Glue—
Antwerp, 1 ck. Tyne S. S. Co.

Limestone—
Antwerp, 4 crts. Tyne S. S. Co.

Magnesia—
Hamburg, 26 cs. Tyne S. S. Co.

Plumbago—
Hamburg, 10 cs. Tyne S. S. Co.

Saltpetre—
Hamburg, 470 t.

Soap—
Rotterdam, 11 cs. Tyne S. S. Co.

Starch—
Rotterdam, 104 cs. Tyne S. S. Co.

Stearine—
Antwerp, 13 bgs. Tyne S. S. Co.

Ultramarine—
Rotterdam, 1 cs. Tyne S. S. Co.

Wood Pulp—
Sarpsborg, 1,500 bls.
Christiania, 160
Laurvig, 180
Gothenburg, 100

Zinc Oxide—
Antwerp, 5 brls. Tyne S. S. C

GOOLE.

Week ending October 21st.

Acetic Acid—
Rotterdam, 90 crbys.

Alizarine—
Rotterdam, 94 cks.

Alum—
Rotterdam, 10 bgs.

Aniline—
Rotterdam, 177 cks. 50 cs.
Hamburg, 4 1

Barytes—
Rotterdam, 25 cks.

Colours—
Hamburg, 10 cks.
Amsterdam, 2

Dyestuffs (*otherwise unde*
Rotterdam, 4 cks. 1 cs.
Boulogne, 21 4 5 pks.
Antwerp, 27

Farina—
Harlingen, 300 bgs.
Delfszyhl, 555

Glue—
Rotterdam, 20 bgs.

Indigo—
Rotterdam, 7 chts.

Ochre—
Rouen, 72 cks.

Pyrites—
Huelva, 518 t.

Saltpetre—
Hamburg, 2 cks.

Soda—
Rotterdam, 20 brls.

Ultramarine—
Rotterdam, 1 ck.

Varnish—
Boulogne, 11 cks.

Waste Salt—
Hamburg, 180 t.

Wood Pulp—
Rotterdam, 52 bls.
Hamburg, 600 bdls.

GRIMSBY.

Week ending October 24th.

Albumen—
Hamburg, 20 cks.

Barytes—
Rotterdam, 134 bgs.

Caoutchouc—
Hamburg, 2 cs.

Chemicals (*otherwise unde*
Hamburg, 18 cks.
Rotterdam, 10 pks.

Colours—
Antwerp, 38 cks. 16 pks.
Hamburg, 20 3 cs. 39

Dyestuffs (*otherwise unde*
Dieppe, 45 cks.

Plumbago—
Hamburg, 9 cks.

Starch—
Antwerp, 241 cs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending October 28th.

Acetic Acid—
Algoa Bay, 6 cks. £12

Acids—
Durban, 7 t. 8 c. £100

Alkali—
E. London, 4 t. 9 c. £23
Lyttelton, 4 3 23

Ammonia—
Durban, 9 c. £40
Lyttelton, 1 t. 112

Ammonium Carbonate—
Marseilles, 7 c. £10
Hiogo, 1 t. 26
St. Petersburg, 12 340

Ammonium Chloride—
Constantinople, 1 t. £33
Wellington, 11 5 c. 373
Varna, 1 1 35
Sydney, 6 1 145
Trebizonde, 15 26

Ammonium Sulphate—
Rouen, 55 t. 3 c. £430
Marseilles, 80 628
Rotterdam, 51 4 365
Hamburg, 80 615

Anhydrous Ammonia—
Demerara, 2 cs. £14

Barium Binoxide—
Paris, 20 t. £609

Bisulphite of Lime—
Cette, 8 cks. £15

Borax—
E. London, 5 t. £83

Calcium Chlorate—
Napier, 4 t. 16 c. £15

Carbon Bisulphide—
Wellington, 1 t. 10 c. £32

Caustic Soda—
Mahe, 1 t. 10 c.
Fremantle, 23
Adelaide, 2 2
Auckland, 14
Ibrail, 1 9
Melbourne, 11
Dunedin, 6

Chemicals (*otherwise undes.*)—
Flushing, 1 ck.
B. Ayres, 22 cs.
Rangoon, 30 pks.

ton, 76 t. 3,040
abay, 8 45
edin, 11 16
al, 1 33 87
bourne, 31 4 c. 1,510
an, 5 31

c Acid—
abay, 2 cs. £10
laide, 3 t. 18
rto, 6 32
Petersburg, 1 10 c. 120
na, 1 ck. 4
nburg, 1 5 kgs. 61

Products—
lizarine
Petersburg, 12 cs. £636
leaux, 5 cks. 129
lizarine Blue
on, 10 cks. 1 bx. £1,160
niline Dyes
utta, 2 cs. £154
niline Oil
York, 19 dms. £1,000
niline Salts
York, 25 cks. £265
othracene
gne, 480 cks. £1,889
nzol
erdam, 97 cks. £489
is, 30 puns. 709
terdam, 50 cs. 251
euzen, 41 dms. 800
nzoline
ng, 8 dms. £5
rbolic Acid
wigstofen, 25 cks. £117
gne, 48 200
erdam, 24 90
eosote
on, 81,813 galls. £929
eosote Oil
burg, 100 brls. £60
eosote Salts
on, 626 bgs. £175
gne, 804 pks. 200
phthа
ourne, 10 crts. £11
tch
verp, 419 t. £775
feld, 325 656
York, 400 brls. 325
ey, 24 15
Vazaire, 959 1,439
edin, 10 cks. 43
, 1,392 2,400
andria, 250 78
altar, 6 6
ourne, 2 5
tch and Tar
ey, 90 pks. £31
ussian Blue
erdam, 4 cks. £18
ridine
burg, 12 cks. £141
r
dad, 20 brls. £16
land, 12 8
ourne, 5 rnlts. 9
, 300 dms. 8
goa Bay, 100 11
Products *(otherwise undes.)*—
ourne, 120 pks. £29
ide, 135 27
r Sulphate—
ico, 2 t. 10 c. £41
din, 1 16
n of Tartar—
ide, 3 t. £263
ourne, 1 86
din, 6 kgs. 12
ey, 2 172
de—
anton, 5 t. £525
ectants—
g, 200 dms. 5 cks. £110
ourne, 2 t. 4 c. 73
ica, 25 kgs. 8
ey, 258 pks. 178
Town, 20 dms. 10
antle, 32 cs. 180
ua, 2 cks. 14
tta, 147 pks. 2 48
ulphite of Lime—
delphia, 15 c. £269
re—
mala, 1 t. 8 c. £11
, 105 10 447
land, 40 175
a, 3 10 31
s, 21 8 168
, 30 233
ca, 10 3 90
rdam, 320 bgs. 234
rara, 50 500
ia, 50 475
Cruz, 19 130

Oxalic Acid—
Dunedin, 2 kgs. £13
Phosphorus—
Dunedin, 1 cs. £10
Potash—
Sydney, 1 c. £12
Wellington, 17 39
Potash Crystals—
Copenhagen, 1 ck. £10
Potash Salts—
Auckland, 11 t. 19 c. £2,000
Potassium—
Dunedin, 4 kgs. £7
Potassium Bichromate—
Wellington, 1 t. 1 c. £46
Potassium Chlorate—
Bombay, 11 c. £27
Potassium Cyanide—
Delagoa Bay, 1 t. £150
Algoa Bay, 2 250
Potassium Nitrate—
Hamelton, 1 t. 3 c. £32
Potassium Prussiate—
Philadelphia 10 cks. £183
Boston, 10 158
Calcutta, 6 c. 18
Danzig, 34 550
Salt Cake—
Terneuzen, 265 t £285
Saltpetre—
M. Video, 2 t. 15 c. £59
Natal, 15 17
Oporto, 1 18 38
Pelotas, 1 14 38
Dunedin, 10 11
Bombay, 13 14
Gothenburg, 1 21
Sheep Dip—
B. Ayres, 200 dms. 625 cs. 3 cks. 206 bgs. £920
Napier, 13 t. 13 c. 396
Dunedin, 4 28
P. Arenas, 5 6 300 cs. 700
M. Video, 3 50
Natal, 7 2 110
Calcutta, 200 dms. 25
Soda—
Sulina, 3 t. £11
Soda Alkali—
Rotterdam, 5 t. 8 c. £32
Sodium Bicarbonate—
E. London, 2 t. 5 c. £16
Sodium Bisulphite—
Toronto, 5 hds. £9
Strontium Nitrate—
Bombay, 9 c. £14
Sulphur—
Cape Town, 100 cks. 50 kgs. £109
Sulphuric Acid—
Montreal, 1 ck. £7
Singapore, 2 t. 10 c. 24
Natal, 1 10 36
Sulphurous Acid—
New York, 51 cs. £84
Tartaric Acid—
Sydney, 14 c. £90
Adelaide, 10 61
Hamburg, 11 cs. 69
Melbourne, 1 t. 117

LIVERPOOL.

Week ending October 28th.

Acetate of Lime—
Montreal, 13 c. 3 q. £8
Albumen—
Vera Cruz, 15 c. £40
Boston, 2 t. 5 50
Alum—
Halifax, 5 t. £25
Galatz, 5 16 c. 1 q. 29
Varna, 6 8 2 29
Volo, 1 7 2 6
Montreal, 12 7 3 56
Singapore, 2 4 13
Penang, 1 9 2 9
Aluminium—
Lisbon, 2 c.
Aluminous Cake—
Calcutta, 14 t. 19 c. 1 q. £66
Ammonium Carbonate—
Stettin, 5 c. £7
Cadiz, 12 18
Rotterdam, 12 17
Montr al, 1 t. 33
Bordeaux, 12 13
Paris, 17 1 q. 27
Marseilles, 1 19 59
Ammonium Chloride—
Alexandria, 2 t. £70
Galatz, 4 c. 7
Patras, 2 4
Bourgas, 6 10
Volo, 6 10
Hamburg, 4 7 1 q. 93
Fiume, 6 10
Syra, 5 8
Antwerp, 5 7
Ammonium Sulphate—
Rio de Janeiro, 19 c. 3 q. £10
Valencia, 9 t. 10 66
Lisbon, 10 3 3 75
Gd. Canary, 20 155
Messina, 2 4 17
Rouen, 4 17 3 35
Tarragona, 10 12 75
Cartagena, 51 16 385
Leghorn, 10 4 2 92
Bleaching Powder—
Baltimore, 58 cks. 60 bxs.
Bombay, 8
Boston, 220
Calcutta, 142 cs.
Genoa, 65
Montreal, 84
Newport News, 69
New York, 480
Salonica, 6
Santos, 4
Borate of Lime—
Odessa, 10 t. 5 c. £220
Borax—
New York, 10 t. 1 c. 3 q. £201
Riga, 4 19 99
Hamburg, 2 6 1 47
Genoa, 1 20
Antwerp, 7 11 3 152
Rotterdam, 7 10 160
Ghent, 11 2 222
Santos, 3 5
Calcium Chloride—
Campania, 5 t. 1 c. £12
Carbolic Acid—
Sydney 1 t. £16
Rotterdam, 25 2 c. 1,255
Mexico City, 6 25
Baltimore, 11 30
Hamburg, 3 172
Caustic Potash—
Chicago, 1 t. 17 c. £53
Caustic Soda—
Alexandria, 92 dms.
Alicante, 40 20 cks.
Baltimore, 50 25 bxs.
Barcelona, 150
Batavia, 25
Boston, 300 135 brls.
Calcutta, 80
Cartagena, S.A., 20
Demerara, 10
Fremantle, 17
Galatz, 10
Hamburg, 35
Havana, 10
Madras, 48
Malaga, 100
Maracaibo, 10
Marseilles, 246
M. Video, 10
Montreal, 335
Naples, 29
Newport News, 100
New York, 710
Penang, 20
Penedo 10
Pt. Elizabeth, 20
Puerto Cabello, 20
Quebec, 100
Riga, 104
Rotterdam, 17
St. Petersburg, 808
Salonica, 7
San Sebastian, 60 30
Savanilla, 45
Seville, 385
Sourabaya, 8
Stettin, 72
Tampico, 35
Valencia, 140
Vancouver, 8
Chemicals *(otherwise undescribed)*
Piræus, 6 c. £10
Genoa, 1 t. 15 61
Constantinople, 2 10 87
Rotterdam, 1 14 62
New York, 5 2 168
Philadelphia, 13 12 448
Calcutta, 64 9 2 q. 176
China Clay—
Barcelona, 50 bgs.
Bombay, 72 cks.
Boston, 4,941
Genoa, 50
Montreal, 124
Naples, 40
Philadelphia, 50
Rio de Janeiro, 40
Chromium Trioxide—
Hamburg, 10 c. £32
Citric Acid—
Vera Cruz, 3 c. £20
Mexico City, 3 20
Seville, 5 31

Coal Products—
Alizarine
Lisbon, 4 cks.
Aniline Colours
Bombay, 4 cs.
New York, 14 cks.
Aniline Oil
Antwerp, 5 dms.
Boston, 5
Genoa, 2
Valparaiso, 3
Aniline Salt
Genoa, 14 cks.
Philadelphia, 19
St. Nazaire, 27 brls. 11 dms.
Naphthol
New York, 21 cks. 1 kg.
Pitch
Sables d'Olonne, 285 t.
Tar
Barcelona, 3 cks.
Bombay, 75 rnlts.
Galatz, 20 brls.
Ibrail, 30
Monbasa, 25
Philadelphia, 100
Santa Marta, 3
Sierra Leone, 5
Varna, 6
Tar Oil
Singapore, 1 cs.

Copper Sulphate—
Calcutta, 5 t. £78
Singapore, 1 17
Galatz, 5 83
Montreal, 2 10 c 30
Campana, 4 74
Sydney, 1 17
Ghent, 2 11 40

Copperas—
Syra, 4 t. £9
Bombay, 20 17 c. 52
St. John, N.B., 1 8 3 q. 3

Disinfectants—
Alexandria, 1 t. 11 c. £25
Calcutta, 5 84
Rangoon, 1 8

Dried Blood—
Gd. Canary, 2 t. £11

Guano—
Malaga, 30 t. £240

Lead Acetate—
Corunna, 5 c. 2 q. £7

Lime—
Demerara, 46 t. 19 c. 1 q. £98

Magnesia—
New York, 1½ qrs. £50
Paris, 22 cs.
Santander, 10 cks.

Magnesium Chloride—
Paris, 10 t. 4 c. £25
Genoa, 5 2 12

Magnesium Sulphate—
Philadelphia, 10 c. £8

Manganese Sulphate—
Montreal, 10 c. 2 q. £11

Manure—
Malaga, 40 t. £200

Mineral White—
Vera Cruz, 10 cs.

Oxalic Acid—
Boston, 11 t. 4 c. £375

Paint—
Acajutla, 25 cs.
Alexandria, 15 cks.
Algoa Bay, 1
Axim, 3
Belize, 40 kgs.
Beyrout, 70
Bombay, 364
Braila, 7
Cape Town, 30 dms.
Demerara, 2 100
Fiume, 25
Genoa, 93 2 cs.
Gibraltar, 4 pks. 4 12
Gd. Bassam, 1 5
Guayaquil, 15

Hamburg, 14
Havre, 9
Havana, 1 25
Hong Kong, 48 dms.
Iquique, 4 168 cs.
Kiee, 4
Lagos, 5 60 bdls.
Lanzarote, 66
Larnaca, 8 brls.
La Union, 20 cs.
Leghorn, 30 bgs.
Maceio, 32
Malta, 40 8 dms.
Marseilles, 10
M. Video, 2
New York, 4 2 cs.
Old Calabar, 4 dms.
Pt Said, 44
Rio de Janeiro, 7
Rosario, 3
St. Thomas, 60
Shanghai, 60
Sherbro, 64
Singapore, 1 cs. 31
Sulina, 2
Syra, 1
Trieste, 80
Valparaiso, 132
Yokohama, 2 21

Painters' Colours—
Alexandria, 229 kgs.
Antwerp, 2 cs. 2 brls. 19 5 dms.
Bahia, 3 6 hds. 30
Bilbao, 20 cks.
Bombay, 20
Gibraltar, 50
Hamburg, 100 bgs.
Montreal, 83
New York, 202 brls.
Oporto, 67
Para, 2
Philadelphia, 4 290 pks.
Ponce, 1 brl. 1 36 tins
Rotterdam, 5 2
St. John's, N'fld., 8 20
Sierra Leone, 8 dms.
Valparaiso, 1,325 cs. 20 40
Vigo, 2 brls.

Paraffin Wax—
Bombay, 5 cs.
Boston, 50
Constantinople, 5
Fiume, 11 10 bgs.
Patras, 4

Phosphorus—
Yokohama, 17 c. £250
Hiogo, 1 t. 8 2 q. 445
San Luis Potosi, 4 40
San Juan, 5 70

Potassium Bicarbonate—
New York, 1 t. 10 c. £41

Potassium Bichromate—
St. John, N.B., 5 c. £11

Potassium Carbonate—
Chicago, 2 t. £40

Potassium Chlorate—
New York, 1 t. £40
Hamburg, 4 c. 8
Leghorn, 1 40
Venice, 1 40
B. Ayres, 10 20
Genoa, 1 40
Konigsberg, 1 15 66
Stettin, 6 10 230
Riga, 1 37
Fiume, 10 19
Hiogo, 20 760
Hong Kong, 2 10 97
Shanghai, 5 195
San Luis Potosi, 10 20
St. Petersburg, 23 3 1,379
Gothenburg, 5 230
Sydney, 5 186
Pernambuco, 1 40
Corunna, 1 38

Potassium Prussiate—
Genoa, 15 t. 10 c. £118

Red Oxide—
Philadelphia, 20 t. 13 c. £277

Salt—
Akassa, 850 t. 8 c.
Ambrizette, 16 16
Antwerp, 685
Axim, 25
Baltimore, 930
Boston, 225
B. Ayres, 60 14
Calcutta, 4,718
Cameroons, 41 16
Cape Lahou, 19 10
Copenhagen, 684
Delagoa Bay, 56 15
Faroe Islands, 144
Freemantle, 1
Fuca, 80
Galveston, 492 12
Ghent, 250
Gd. Bassam, 24 12
Iceland, 109
Lagos, 95
Melbourne, 275
M. Video, 20
Montreal, 774 5
Newfairwater, 5
N. Orleans, 155
New York, 198
Noki, 20
Old Calabar, 300
Opobo, 40
Pt. Natal, 100
Pt. Royal, 1,009
Rangoon, 360
Rosario, 51
Rotterdam, 555
Salt Pond, 25
Sierra Leone, 20 1
Sydney, 67
Trinidad, 33 10
Valparaiso, 440 3 300 cs.
Vera Cruz, 10
Victoria, 75
Winnebah, 63 10

Salt Cake—
New York, 3 t. 19 c. £71
Antwerp, 50 8 66

Saltpetre—
Maranham, 6 c. 3 q. £8
Para, 1 t. 5 20

Sheep Dip—
B. Ayres, 79 t. 14 c 3 q. £1559

Silicate—
Seville, 50 cks.

Soap—
Akassa, 60 tins
Algoa Bay, 500 bxs. 74 cs.
Antigua, 50
Antwerp, 442
Barbadoes, 125 2
Belize, 2,775 1
Bombay, 7 cks. 64
Boston, 500
B Ayres, 1
Calcutta, 500 bdls.
C. C. Castle, 50 2
Chama, 70
Colon, 2
Constantinople, 2
Curacao, 152
Delagoa Bay, 350 35
Demerara, 1,000
E. London, 712
Gibraltar, 145 10
Grenada, 200
Havre, 50 1,055
Hong Kong, 600
Karachi, 26
Java, 2,500
Lagos, 100
Madras, 41
Manaos, 2
Montreal, 25
Mossel Bay, 645
New York, 991 8 cks 55
Old Calabar, 2,800
Opobo, 4,500
Oporto, 10
Para, 3
Pernambuco, 1
Piræus, 33 12
Pt. Elizabeth, 250 50
Pt. Natal, 500 1
Pt. Said, 40
Rangoon, 3
Rotterdam, 400
St. Kitts, 400
St. John's, N'fd., 51 210 dms.
St. Thomas, 1
Salt Pond, 250
Santa Cruz, 20
Sierra Leone, 300
Singapore, 251 35
Teneriffe, 324
Trinidad, 1,025
Warri, 749
Cape Town, 1,485 90

Soda—
New York, 1 cs.

Soda Alkali—
Barcelona, 70 brls.
Corfu, 35
Lisbon, 190
Montreal, 50

Soda Ash—
Baltimore, 390 bgs.
Barcelona, 2 cks.
Boston, 120 tcs. 1,080
Dunedin, 35 cks.
Genoa, 25 brls.
Gothenburg, 60 350
Hamburg, 3 50
M. Video, 90
Montreal, 2,088
New York, 140 tcs. 1,850
Parnahyba, 10
Piræus, 95
Puerto Cabello, 12 cks.
Rio de Janeiro, 20 90
Rotterdam, 240
St. Petersburg, 287
Singapore, 33
Sydney, 21
Syra, 300
Wellington, 11

Soda Crystals—
Boston, 420 brls.
B. Ayres, 68 cks.
Gibraltar, 30
M. Video, 75
Montreal, 1,044
New York, 280 1 cs.
Otago, 14 kgs.
Philadelphia, 140
Toronto, 50

Sodium Bicarbonate—
Auckland, 48 kgs.
B. Ayres, 44 cks. 50 bgs. 50
Cape Town, 40
Copenhagen, 10 48
Dantzic, 25
Galatz, 94
Ghent, 30
Hamburg, 10 brls.
Madras, 75
Malta, 20 bgs.
Melbourne, 26
Montreal, 25
Newcastle, 80
Newport News, 480
Odessa, 100
Pt. Natal, 9 20
Rotterdam, 25
St. Petersburg, 290
Samarang, 3
Seville, 4 brls. 30
Singapore, 100
Sydney, 100
Tampico, 50 bgs.
Toronto, 150
Valencia, 3
Wellington, 240

Sodium Bichromate—
Syra, 2 brls.

Sodium Carbonate—
Rotterdam, 30 brls.

Sodium Chlorate—
Lisbon, 1 ck.
St. Petersburg, 40 550 kgs.

Sodium Silicate—
Freemantle, 15 cks.
Galatz, 15
Gothenburg, 4
Hamburg, 6 dms.
Karachi, 8
Malta, 11
Maranham, 2
Melbourne, 13
Syra, 10 brls.
Tarragona, 15
Valencia, 20
Vera Cruz, 10

Sodium Sulphate—
Alexandria, 40 brls.
Bombay, 25 bgs.
Pernambuco, 9

Starch—
Calcutta, 12 cs.
St. John's, N'fd., 40

Strontia—
Hamburg, 199 t. 8 c. £1,397

Sulphur—
Savanilla, 10 c. £4
Ghent, 6 t. 22
Montreal, 1 5 9
Copenhagen, 5 2 18
Boston, 55 1 178
Philadelphia, 125 2 407
Cartagena, N.G., 10 4
Rio de Janeiro, 1 9 2 q. 11
Halifax, 1 0 1 9
Iquique, 27 182

Superphosphate—
Gd. Canary, 17 t. £58
Valencia, 400 2 c. 816

Tin Salts—
Barcelona, 1 t. 12 c. £70

Varnish—
Alexandria, 2 cs.
Bilbao, 4 cks.
Bombay, 3
Genoa, 4
Leghorn, 1 5
Lisbon, 3
Montreal 3 pks.
Piræus 6
Pt. Said, 2 dms.
Rosario, 5
Syra, 1
Valencia, 20
Valparaiso, 20
Whiting—
St. John's, N'fld., 10 cks.
Zinc Chloride—
Bombay, 10 t.

MANCHESTER.

Week ending October 28th.

Ammonium Carbonate—
Hamburg, 3 cks.
Antwerp, 2 20 kgs.

Aniline Colours—
Hamburg, 3 cs. 8 kgs.
Rotterdam, 1 1
Paris, 1

Aniline Oil—
Rotterdam, 2 dms.
St. Petersburg, 10

Aniline Salt—
St. Petersburg, 13 pns.

Benzol—
Rotterdam, 26 cks.

Bleaching Powder—
Bombay, 1 cs.

Carbolic Acid—
Hamburg, 16 cks.
Rotterdam, 25

Caustic Soda—
Rotterdam, 32 dms.

Creosote Salts—
Rotterdam, 33 cks.

Glue—
Rotterdam, 20 cks.
Rouen, 5

Linseed Oil—
Gothenburg, 1 ck.

Painters' Colours—
Antwerp, 1 cs.

Paraffin Wax—
Barcelona, 30 bgs.

Pitch—
Treport, 25 t.
Cette, 640

Salt—
Rotterdam, 2 cks.

Tar Oil—
Antwerp, 6 tins

Tar Salts—
Hamburg, 38 cks.
St Petersburg, 200 bgs.

Toluol—
Rotterdam, 54 cks. 21 dms.

HULL.

Week ending October 24th.

Alkali—
Abo, 13 cks.
Bremen, 120 bgs.

Ammonium Sulphate—
Dunkirk, 487 bgs.

Bleaching Powder—
Abo, 13 cks.
Helsingfors, 15
New York, 118
Venice, 25

Caustic Soda—
Bari, 18 cks.
Abo, 103
Fiume, 30 dms.
Helsingfors, 7
Riga, 32
Stettin, 10
Trieste, 17
Venice, 90
Wyburg, 3

Chemicals (*otherwise undescribed*)
Amsterdam, 10 cks.
Bombay, 1,200 300 pks.
Bari, 18 cs.
Abo, 14
Antwerp, 3 22
Bergen, 1
Copenhagen, 19

	13	30	1,445 slbs.
o brls.	20		96 pks.
g,		5	11
s,	4	6	20
	17	270	
,	307		150
,	37	50	12 kgs.
	23		
	15		3 pks.
	12		
burg,	50	1	
	13	20	
	27		
	10		
	2 cks.		

ed Oil—

n,	1,703 c.
	1,349
	7
and,	35
n,	76
	100
	76
rg,	50
,	2,064
rg,	100
n,	701
	604
	100
	501 cks.

(*otherwise undes.* **)—**

n	24 cks.
	2 cs.
m,	10 bgs.
urg,	8

Oil—

	107 c.
	420
	11
sund,	36
sand,	35
gen,	7
ia,	528
m,	55
,	859
e,	142
k,	8
m,	706
r,	35
	125
	50 t.

' Colours—

am,	15 cks.	
	22 cs.	
,	17 5	
	7 163	
		100 dms.
gen,	38	1 pk.
ia,	1 cs.	
	2	19 dms.
urg,	39 1	
	5	
ors,	30	
ee,	1	
g,	18	5
erg,	12	
rk,	144	
,	1	
am,	139	25 pks.
er,	1 1	
	31	
rsburg,	54	
	20	
	7	

ate—

	162 t.
lam,	80 bgs.
,	80 t.
rk,	200 cks.
,	450 t.
	60 bgs.
agen,	1 cs.
nia,	1
rg,	3
	50 cs.
dam,	10 cks.
vg,	2 c.
am,	78 cks.
p,	25 cks.
rg,	15
am,	5
,	10
	5

Treacle—

Abo,	15 brls.

Varnish—

Antwerp,	5 cks.
Bombay,	75 dms.
Hamburg,	9 1 cs.
Kurrachee,	5
Rotterdam,	¼ brl.
Riga,	1
Stettin,	12

Whiting—

Amsterdam,	16 cks.

Zinc Chloride—

Kjoge,	260 cks.

GLASGOW.

Week ending October 29th.

Ammonium Sulphate—

France,	40 t.	8¾ c.
Hamburg,	50	13
Rotterdam,	50	15
Rouen,	23	18

Bichrome—

Bergen,	16 c.

Bleaching Powder—

Melbourne,	20 t.	19 c.
U.S.A.,	6	17

Borax—

Melbourne,	£28

China Clay—

Bahia,	8 t.	15½ c.

Coal Products—

Creosote

France,	£50

Creosote Oil

Christiania,	£10
Hamburg,	5 t. 10 c.

Pitch

France,	450 t.	6 c.
Havre,	560	
Rotterdam,	100	
Canada,		£343
Montreal,		30

Tar

Rangoon,		£187
Christiania,	22 brls.	
Hamburg,	50	
Riga,	550	
Canada,		205

Coal Products *(otherwise undes.)*—

Rotterdam,	£668
Riga,	171

Copperas—

Bombay,	£38

Dextrine—

New York,	£247
U.S.A.,	122

Dyestuffs *(otherwise undescribed)*

Melbourne,	£139

Extracts—

Stavanger,		5 c.
Victoria,		£140
Canada,		£265. 13s.
Cornwall,		£745
Gothenburg,		100

Glucose—

Cape Town,		10 c.
Canada,	4 t.	15

Lead Nitrate—

Paris,	£160

Linseed Oil—

Adelaide,	5 t.	18¾ c.
Canada,	15	10¾
Cape Town,	2	2

Manganese—

Basle,	£95
Paris,	50
Rotterdam,	120

Manure—

Spain,	10 t.	¾ c.
Rouen,	20	2

Paint—

Bombay,	£32
Cape Colony,	235
Cochin, China,	33
Hiogo,	32
Singapore,	58
Straits,	50
Hobart,	26
Havana,	74

Painters' Colours—

Cape Town,	£58
Sandefjord,	£10. 15s.
Melbourne,	qty.

Paraffin Wax—

Arendal,	£30
Stockholm,	530
Paris,	90

Potassium Bichromate—

Hiogo,	£402
U.S.A.,	613
Rotterdam,	196
Antwerp,	162
Rouen.	583

Potassium Prussiate—

U.S.A.,	£779
Lyons,	297
Paris,	297

Soap—

Johannesburg,	2 t.	8 c.
Natal,	2	6

Sodium Bichromate—

Antwerp,		19¼ c.
Rouen,	43 t.	3½
U.S.A.,	11	1

Starch—

Rotterdam,	7½ c.
Rio de Janeiro,	£27

Sulphuric Acid—

Rangoon,	£349

Tallow—

Rangoon,	£47

Treacle—

Gothenburg,	65 t.	16¾ c.
Amsterdam,	2	14
Bergen,	7	12
Christiania,	23	10
Stockholm,	20	7

Varnish—

Rangoon,	£29
Western Australia,	100

White Lead—

Transvaal,	£58
Singapore,	35

TYNE.

Week ending October 24th.

Alkali—

Finland,	1 ck.	
Copenhagen,	1 t.	4 c.
Rotterdam,	10	15
St. Petersburg,	9	1
Amsterdam,	21	8
Gothenburg,	37	
Bergen,	2	18

Alum Waste—

Montreal,	85 t.	9 c.

Alumina Sulphate—

Barcelona,	5 t.	3 c.

Ammonium Carbonate—

Hamburg,	5 c.

Ammonium Chloride—

Barcelona,	6 t.	19 c.

Ammonium Sulphate—

Rotterdam,	20 t.

Antimony—

Hamburg,	2 t.	
Montreal,	2	
St. Petersburg,	15	19 c.

Barium—

Barcelona,	1 t.	
Hamburg,	1	1 c.

Blanc Fixe—

Montreal,	11 t.	11 c.

Bleaching Powder—

Aarhuus,	20 t.	6 c.
Stockholm,	45	2
Finland,	69	
Hamburg,	110	19
Copenhagen,	20	9
Aalborg,	2	17
Rotterdam,	12	4
St. Petersburg,	126	
Amsterdam,	67	2
Gothenburg,	35	7
Bergen,	11	1

Carbolic Acid—

Bergen,	3 c.

Caustic Soda—

Stockholm,	12 t.	11 c.
Finland,	40	17
Hamburg,	53	7
Bilbao,	10	3
Montreal,	29	
Copenhagen,	7	16
Rotterdam,	1	16
Amsterdam,	16	10
Gothenburg,	15	1

Copperas—

Finland,	6 cks.

Fluor Spar—

Gothenburg,	48 t.	3 c.

Litharge—

Stockholm,	1 t.	3 c.
Montreal,	1	8
Amsterdam,		13

Magnesia—

Barcelona,	6 t.	6 c.
Stockholm,		5
Lisbon,		5
Hamburg,		1
Rotterdam,		4
St. Petersburg,		10

Paint—

Hamburg,	1 t.	
Gothenburg,		4 c.

Phosphorus—

Barcelona,	14 c.

Soda—

Aarhuus,	11 t.	10 c.
Lisbon,	5	5
Finland,	31	15
Hamburg,	21	11
Randers,	16	17
Rotterdam,	10	
Gibraltar,	16	5
Amsterdam,	62	
Gothenburg,	15	4

Soda Ash—

Lisbon,	10 t.	
Gothenburg,	89	7 c.
Bergen,	6	1

Sodium Hyposulphite—

Montreal	21 t.	8 c.
Amsterdam,	11	4

Sodium Prussiate—

St. Petersburg,	18 c.

Sodium Silicate—

Piræus,	10 t.	3 c.

Sodium Sulphate—

St. Petersburg,	24 t.	17 c.

Sulphur—

Hamburg,	200 t.	2 c.
Copenhagen,	5	
Gothenburg,	50	

Superphosphates—

La Rochelle,	1,615 t.	16 c.

Tallow—

Hamburg,	1 t.	1 c.

White Lead—

Lisbon,	2 t.	19 c.
Copenhagen,	3	18

Zinc Ashes—

Stockholm,	3 t.	13 c.

GOOLE.

Week ending October 21st.

Benzol—

Boulogne,	24 cks.
Rotterdam,	90

Chemicals *(otherwise undescribed)*

Boulogne,	10 cks.
Ghent,	7

Coal Products *(otherwise unaes.)*—

Amsterdam,	171 cks.	
Antwerp,	3	
Boulogne,	54	2 cs.
Hamburg,	17	

Colours—

Antwerp,	2 cks.
Ghent,	4
Harlingen,	10

Dyestuffs *(otherwise undescribed)*

Boulogne,	2 cks.	
Ghent,		1 cs.
Hamburg,	115	
Rotterdam,	5	4

Pitch—

Antwerp,	950 t.

GRIMSBY.

Week ending October 24th.

Alkali—

Hamburg,	10 cs.

Chemicals *(otherwise undescribed)*

Dieppe,	17 cks.	1 cs.
Hamburg,		21 dms.
Rotterdam,	1	19

Coal Products *(otherwise undes.)*—

Dieppe,	169 cks.	3 pks.
Hamburg,	3	6 btls.

Colours—

Antwerp,	3 cs.	9 pks.
Hamburg,	4 cks.	1

Dyestuffs *(otherwise undes.)*—

Dieppe,	3 cks.

Soap—

Dieppe,	1 pk.
Helsingborg,	1

PRICES CURRENT. WEDNESDAY, NOVEMBER 4TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5/10½ &	8/9	
,, Glacial .. .. ,,		0/-	
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	2¾
Arsenic, white powdered .. .. nett per ton	22	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/-&	35/-	
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	12	6
,, ,, (grey) Hull .. .. ,,	7	10	0
Aniline Oil (pure) .. .. per lb.	0	0	11
Aniline Salt ,, ... ,,	0	0	10½
Antimony .. .. per ton	28	15	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to	65/-	
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to	30/-	
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	4	6
,, 50/90 ,, ... ,,	0	3	1½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7
,, (crude 60°) .. .. per gallon	0	1	10
Creosote (ordinary) .. .. ,,	0	0	1½
,, (filtered for Lucigen light) .. .. ,,	0	0	2
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	48	18	9
,, Sulphate .. .. ,,	16	10	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	42	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	10	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	14	15	0
,, *Carbonate* (white lead) pure .. .. .. ,,	16	0	0
,, *Nitrate* .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	7	6
,, ,, (grey) (ex ship .. .. ,,	8	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magne .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	5
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	9
Oils:—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	7
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	10	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	6
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	5¾
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % . ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5
,, Borate (Borax) .. .. net, per ton.	19	10	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	0	0
,, ,, (60 % Caustic Soda) .. ,, ,,	6	5	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	0	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	2	6½
,, Barium, 95 % .. .. ,,	0	2	4½
,, Potassium .. .. ,,	0	2	6½
Sulphur (Flowers) .. .. per ton.	7	0	0
(Roll Brimstone) .. .. ,,	6	5	0
,, Brimstone: Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	4¾
,, English Ingots .. .. per ton	63	0	0
Zinc (Spelter) .. .. ,,	17	5	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

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ertisements intended for insertion in the current week's issue reach the office by **Thursday morning** at the latest.

NITRATE PROSPECTS.

A NUMBER of changes, by no means unlikely to influence the nitrate of soda industry, have been noticeable of late, and it will therefore not be out of place if advantage is taken of the opportunity thus afforded for reviewing the position.

Till within the last two years or so the nitrate industry has been a flourishing and a promising one, and in a sense it is such now, but the tide of prosperity has undoubtedly slackened, bringing with it a proportional increase in the promises of good things to come.

Without wishing to be unduly severe or pessimistical, it must be said that the commercial and financial history of nitrate of soda has been characterised, almost from the first, by unlimited prospects and substantial dividends, which have both somehow had an unhappy knack of dwindling away with the progress of time, till they have in many cases assumed almost microscopical dimensions.

These circumstances have been gradually rendered conspicuous by the reports of the various nitrate companies that usually appear about this time. To put it mildly, they are depressing. The combination, the consummation of which was so long awaited, seems to have been effected too late to accomplish much of the good that was expected from it.

It is not desirable to dwell just now upon the circumstances which retarded so seriously the formation of the combine. That the delay was expensive is now only too obvious, but delayed it was, and no good can result now from raking up all the circumstances which necessitated such protracted negotiations.

There are other more weighty matters that call for consideration. Assuming that the combine will sooner or later assist the advance of prices, by reducing the production, it would seem that the good achieved in this direction will be well-nigh counterbalanced by the other difficulties that will have to be faced.

Reference was made some time back to the jealousy evinced by the Chilians, at the money that was being made by the aid of foreign capital out of the natural resources of Chili. The feeling that was then expressed could scarcely be considered a favourable harbinger, but apart from this the Chilian Government are evidently more anxious than ever to look after the interests of No. 1.

With this view they have put into force certain new regulations respecting the shipment of nitrate, the main object of which is obviously to ensure the more exact levy of the duties on nitrate, which already provide the Government with a very respectable revenue.

Those companies that are straining every nerve to make both ends meet, to say nothing of providing a dividend for the shareholders, may however find some consolation in the fact that plentiful as new nitrate ventures may have been

they are not likely to be troubled with many fresh competitors, for the time being at all events. The existing situation in Chili is such that some time will elapse before the confidence of investors in things Chilian is completely restored. That it was shaken has been shown by the tardiness with which the last Chilian loan was taken up, and also by the class of capitalists who patronised it.

But the circumstances which afford this modicum of consolation are probably of an ephemeral nature, and it is desirable that some amelioration of the present state of affairs should be discernible in the very near future. The arrivals of nitrate, though certainly less when compared with the corresponding shipments in 1895, are nevertheless going far too slowly into consumption, and the stocks must be swelling formidably when less than a tenth of the arrivals are absorbed by orders, as was the case with the shipments of the past fortnight.

Apparently the direction in which the exercise of self-restraint is most needed is that of internal differences. Now that the lodestar of the industry is no longer controlling nitrate affairs it will take the united energies of the minor leaders to keep the machinery of nitrate finance running smoothly, and their energies must not be frittered away in internecine dissensions, as promises to be the case in one or two instances. The spirit of the combine must be allowed to actuate the heads of the various companies represented in this great amalgamation if the benefits looked for are to accrue to all nitrate shareholders, instead of to the few whose directors are alive to the necessity of keeping the peace or "doing their washing at home" and in privacy.

MORE BLACK SMOKE PROSECUTIONS.

INCONGRUOUS DECISIONS.

ON Wednesday, two more summonses arising out of the campaign of the Manchester Corporation against the emission of black smoke from the chimneys of works in the township, were heard at the Manchester Police-court. The first case was that of Thomas Hyland and Co., manufacturing chemists, Beswick, who were summoned under the Public Health Act for creating a nuisance by the emission of black smoke contrary to a magistrates' order made in 1892. Mr. Rook, superintendent of the Sanitary Department, on behalf of the Corporation, said that since the order was made they had very little difficulty with the defendant firm, and under the circumstances he applied that the case should be adjourned until January 20, when other adjourned summonses would come before the court.—Dr. Pankhurst, instructed by Mr. Rowlands, who appeared for the defence, assented, and the summons was accordingly adjourned.

Messrs. Levinstein Limited, manufacturing chemists, Crumpsall Vale, were summoned for a like offence. Dr. Pankhurst (instructed by Mr. Newman) again defended. The case for the prosecution was that on the 15th of last month an inspector took an observation at the works, and in the course of half an hour saw four minutes' black smoke emitted from one of the chimneys. It was stated that numerous complaints had been received with reference to the nuisance arising out of the emission of black smoke at these works, and under all the circumstances a penalty was asked for. The inspector, in the course of cross-examination, admitted that some of the operations carried on at the works required intermittent firing.—Dr. Pankhurst, for the defence, said the case brought the manufacturers of the city into a very perilous position. There was no substance in the case to warrant a conviction. Everything had been done that could be done to prevent the emission of black smoke, which, if it took place, was due to the necessity of intermittent firing in connection with which no smoke preventive appliance was known. He also contended that the magistrates' order for abatement was bad in law, because it did not specify the work to be done to bring about the required abatement. If the intermittent firing was not allowed to be proceeded with in relation to certain important processes, it would become a question whether the works should not be removed elsewhere, as it was impossible to carry on intermittent firing without the emission of a certain quantity of black smoke.—Mr. Levinstein, examined by Dr. Pankhurst, said he had done everything that was possible to prevent the emission of black smoke in conjunction with intermittent firing. He was quite willing to adopt any preventive appliance regardless cost.—By Mr. Rook: His firm had been proceeded against on occasions since the abatement order was made in 1892.—Mr. Hea held there had been a nuisance, and inflicted a fine of £5.

SUGGESTED INSTITUTION OF A PATENT COU

A MEETING of the Society of Patent Agents was held on Mo evening at Anderton's Hotel, London. The president Mr. J. S. Fairfax, was in the chair. The principal business meeting was the reading of a paper by the Chairman, in the cou which he suggested the institution of a patent court. This, he tended, would prove beneficial to inventors who did a vast amo good to the industries of the country. Mr. Fairfax did not however, that the objections to the present mode of adminis justice in patent cases would be altogether removed by such a cou which, he feared, the cost of obtaining justice would still be h than in others. He regretted that there were signs of the advent new profession—viz., that of witnesses in patent cases, who mo engaged by either of the litigants concerned. These witnesses become in practice advocates for the side by whom they were eng because their evidence could not be checked by judges in the ord way.—Mr. Fairfax was also sceptical as to the invariably ben effect of expert evidence upon judges in making their decisions. Wilkins, who opened the discussion, agreed with the chairman legal procedure in patent cases needed revision, and remarked the tendency of solicitors to prolong cases and render them costly.—Mr. Gardner advocated the formation of a committee or eight expert patent agents whose opinion should be taken in d ful cases.—In this suggestion Mr. Bromhead cordially agree court which could be applied to by an inventor for a certificate of would enable him to go to capitalists with greater chances of su The Government, he thought, had no right whatever to levy a tax on the inventive genius of the country. The cost of litigati patent cases was a scandal to the country, and deterred people defending actions when they knew they were in the right.— Tristram, a solicitor, did not see that a case had been made out fo establishment of a special court. In his opinion the fees of ex were far too large, and it was in this direction that he found a increase in the expenditure involved in fighting patent cases.— Fairfax, replying to criticism on his paper, remarked that he did intend to advocate an entirely new court, but rather that one of now existing should be specialised.

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign colonial statistics of the United Kingdom, give the amount value of alkali and bleaching materials shipped to the undermentio countries for month of September, 1896, as compared with 189

ALKALI.

Port.	1895.	1896.	1895.	189
	Cwts.	Cwts.	£	£
Russia	18,428	26,352	5,807	7,4
Sweden and Norway	12,384	13,62 .	2,581	2,2
Germany	6,384	24,060	2,007	5,1
Holland	10,386	8,134	1,834	1,8
France	3,685	3,344	1,419	1,2
Spain and Canaries	29,223	26,671	10,265	9,8
Italy	13,844	18,930	4,372	6,1
United States	308,291	135,373	64,271	25,1
Australasia	13,540	18,937	4,004	5,9
British North America ..	18,743	19,225	4,698	5,1
Other countries	84,160	86,680	25,702	24,1
Total	519,068	381,326	126,960	103,5

BLEACHING POWDER, ETC.

Port.	1895.	1896.	1895.	189
	Cwts.	Cwts.	£	£
United States	58,075	51,344	22,194	17,1
Other countries	46,648	38,698	16,967	12,9
Total	104,723	90,042	39,161	30,0

THE IRON AND STEEL PLANT CO., LTD.—We are advised on and after Nov. 9th the discount on all taps, syphons, pumps, made by this firm, will be reduced from 25 per cent. to 20 per cent.

The Patent List.

is list is compiled from Official sources in the Manchester ical Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

PPLICATIONS FOR ENGLISH LETTERS PATENT.

ng Slags and Ores containing Zinc. H. E. Fry and N. G. Hackney. 788. October 26.

ical Storage Batteries E. W. Bonson. 23,827. October 27

facture of Alumina and Carbonate of Soda. F. M. Spence, D. D. ence, and A. Shearer. 23,858. October 27.

Devices for Gas Producers. A. C. Humphreys and O. G. Glasgow. 904. October 27.

atus for the Extraction of Gold by Aid of Chemical Solvents. Y. Johnson. 23,954. October 27.

ng Machines. R. Wallwork and A. C. Wells. 23,965. October 27.

s and Filtering Materials. G. S. Morris and W. J. George. 24,031. tober 28.

ating Gold from Solutions thereof. S. O. Cowper-Coles. 24,053. tober 28.

l Soap. T. H. Bateman. 24,090. October 29.

Presses. J. W. Hartley. 24,096. October 29.

arging Sewage, etc , into Tidal Waters. J. Daye. 24,146. Oct. 29.

ial Stone. A. Clery. 24,242. October 30.

ng Gold, etc., Slimes. G. J. Atkins. 24,243. October 30.

ering Metal from Solutions of their Salts by Substitution and ecipitation G. J. Otkins. 24,244. October 30.

anically Inserting Filling Material into Electrodes. F. Wüste. 329. October 31.

ing Bottles with Compressed Gases. H. V. R. Read. 24,344. tober 31.

STRACTS OF LATEST COMPLETE SPECIFICATIONS.

se abstracts are specially prepared for the Chemical Trade Journal, LL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the*

vements in Cleaning or Removing Grease from Cotton Waste or her Fibrous or Textile Material, and in Apparatus therefor, and Recovering the Solvents. J. W. Mitchell, Holme Mill, Rawtenstall, ncashire. Eng. Pat. 23,429. December 6, 1895.

evolving kier is used for the extraction, the solvent being run in h one trunnion and removed through the other when charged rease. It in turn passes to a still where the solvent is vapour- condensed, and returned to the storage tank. The process is cally continuous, and the chief advantage claimed is that the al need not be removed from the kier until the extraction is eted. The solvent remaining in the material is driven off by team, (c f. claims of Patent, No. 16,766, 1896, *C.T.J.*, No. , 289.) There are three drawings.

vements in a Process and Apparatus for the Electrolytic oduction of Metallic Zinc from Ores of Zinc, and Metallic Zinc d Metallic Copper from Zinc Ores containing Copper, and the oduction of Oxygen Gas in the cases specified. C. A. Burghardt, Fountain-street, Manchester, and G. Rigg, 1, Ellesmere-grove, Eccles. g. Pat. 22,732. November 28, 1895.

re is virtually no difference between this patent and No. 19,934 5, save a slight technical distinction which relates to a separate ent for zinc ores *per se* and zinc ores which contain copper.

cess for Obtaining Hydrosulphide of Sodium or Sulphate of dium and Sulphuretted Hydrogen and Sulphate of Calcium from lphide of Calcium or Soda Residues and Monosodium Sulphate Bisulphate of Soda. B. Willcox, 47, Lincoln's-inn Fields, London. mmunicated by the Chem. Fab. Griesheim, Frankfort a/ Maine.) Eng. Pat. , January 10, 1896.

familiar reaction between calcium sulphide and saltcake is known e drawbacks which are overcome by using the bisulphate or cake. The products are then either NaHS or Na_2SO_4, calcium te and sulphuretted hydrogen. The formation of the two first ned depends upon the quantity of bisulphate used in the decom- n. The sulphuretted hydrogen gas given off results from the of the free acid in the nitre cake, calcium sulphate naturally formed at the same time. The mechanical difficulties are greatly d as compared with the carbonic acid gas treatment for the tion of alkali waste.

An Improved Process for Treating Sulphide Ores containing Zinc and other Metals. Thos. Parker, Manor House, Tettenhall, Wolverhampton, and J Pullman, 17, Greek-street, Soho, Middlesex. Eng. Pat. 23 543 December 9, 1895.

The raw unroasted ores are treated with hot hydrochloric acid at about 90°C The lead dissolved crystallizes out on cooling. Any iron present may be removed by adding excess of zinc carbonate, or by the addition of a weak solution of bleaching powder. The resulting solution of zinc chloride is neutralized and kept neutral by the aid of zinc carbonate and then electrolysed to obtain the zinc in the metallic form. The chlorine and hydrogen sulphide gases given off can be collected if desirable. The residue of the ore is further treated with acid to remove traces of lead, zinc, and iron, and any silver present is then recovered by the hypo, hot brine, or any other suitable process.

Improvements in the Manufacture of Alkaline Cyanides, Ferrocyanides and their derivatives. G. C. Downing, 8, Quality-court, London, W.C (Communicated by J. R. Moise, of Paris.) Eng. Pat. 19,701. October 12, 1895.

The object is the direct formation of the cyanide without first forming ferro-cyanides. The process is divided into two parts. The first is the manufacture of nitride of boron. A mixture of biborate of soda and hydrochlorate of ammonia is calcined. The resulting products are the nitride and common salt. The latter is removed by lixiviation. To prepare the cyanide the boron nitride is mixed with carbonate of potash and lamp-black, and the mixture heated to dull redness in an iron crucible. Potassium cyanide and borate are left, the latter being removed by alcohol. Ferro-cyanides are prepared in the usual way and separated by fractional crystallization. The borates recovered can be used over again. The mixture of biborate and hydrochlorate of ammonia must be very finely ground.

An Enamel Paint and Combination of Materials for composing the same. G. W. N. Hamilton, Greig-street, Albert Park, Colony of Victoria Eng. Pat. 19,318. September 1, 1896.

This enamel dries very quickly, and is suitable for coating all piles and parts of vessels continually immersed in water. It consists essentially of methylated spirits or ether as a solvent for shellac, white pine resin, camphor, gum arabic, and a suitable colouring matter.

An Improved Manufacture of an Antiseptic Disinfectant. A. J. Boult, 323, High Holborn, London. (Communicated by F. Fritzsche and Co., Chemical manufacturers, Hamburg). Eng. Pat. 1,409. January 20, 1896.

Oxychinoline is the basis of the disinfectant, but instead of acting on it with sulphuric acid pyrosulphate of potassium is used. Two molecules of α-oxychinoline in alcohol are boiled with one molecule of potassium or sodium pyrosulphate. The resulting product is dried and pressed. It has no smell, is not poisonous, and is soluble in water.

Improvements in Lyes or Liquors for Preparing Hides for Tanning C. D. Abel, 28, Southampton-buildings, Chancery-lane, London, W.C. (Communicated by Drs. Popp and Becker, of the Chem. Tech. and Hygienisches Institut, Frankfort a/ Maine, Germany.) Eng. Pat. 21,720. November 15, 1895.

The patentees have investigated the principles on which the action of the dung-bath-treatment of hides, after the liming process, is based. They find it to be due to the presence of certain bacteria, those of the non-peptonising order having a favourable influence. This invention deals with proposals for suppling pure cultures, which shall have the same effect as a bath of dog dung, etc., and also means for putting these cultures on the market in a convenient form. Suitable liquids, also bran and flour, are useful *media*. When once produced in sufficient quantities the liquids can be "sterilised" and put on the market as a solid or a brine.

Improvements Relating to the Production of Phosphorus, its Acids and Salts, from Mineral Phosphates, Bones, and other materials containing Phosphoric Acid. H. Hilbert, Biebrich a/ Rhine, and A. Frank, 80, Liebnitzstrasse, Charlottenburg. Eng. Pat. 18,785. October 7, 1895.

Mineral phosphates, bones, basic slags, and such like materials are treated in an electric furnace with carbon, so as to form a carbide, phosphorus being liberated. Though the formation of the metallic carbides is advantageous, still the chief object is the liberation of the phosphorus, which is received in suitable condensers, and can be converted into its acids and salts in any known manner. The carbides are run off in a molten state. In the case of aluminous phosphates the following reaction applies :—

$$4AlPO_4+19C.=Al_4C_3+4P+16CO.$$

The other reactions are the same in principle, but differ essentially from those set forth in Patents 17,719 of 1888 and 10,437 of 1889.

KILLED BY CARBON DIOXIDE—A workman was killed, last week, by carbonic acid gas poisoning at the Star Chemical Works, Wandsworth Bridge-road, London.

SOCIETY OF CHEMICAL INDUSTRY.

MANCHESTER SECTION.

THE opening meeting of the session 1896-7 was held at the rooms of the Chemical Club, Victoria Hotel, Manchester, on Friday, 6th inst., at 7 p.m., when the chairman, Mr. George E. Davis, delivered his opening address. He dealt first of all with the present depression in the chemical trade, and explained the position by the aid of a number of interesting figures and tables, showing a comparison of the prices of caustic soda, bicarbonate, 58 % alkali, bleach, soda crystals, and saltcake, from 1888 up to the present time. After drawing several interesting lessons from the conditions revealed by this *data* he relieved the gloom which they tended to create by stating that in regard to bleach and saltcakes at all events, he thought things were on the change for the better, and that such a change was nearer than some supposed.

He next dealt with the question of inspection. He said that the chemical trade was one that had been harassed in a special degree by Acts of Parliament, provisional orders, nuisance inspectors, factory inspectors, and he knew not what. The harassing had been done, however, not so much by inspectors as by busybodies outside the trade. In this connection he recounted several amusing cases which had come under his notice as an inspector, which proved very conclusively how closely personal enmities were connected with a great many of the complaints lodged against chemical manufacturers. In one case it was found that an almost ceaseless string of complaints about the damage done to gardens originated every time with a chemical plumber whose services had been dispensed with because it was cheaper to keep on a works plumber than pay the original plumber's charges for occasional work.

Such people endeavoured to foist on the public ideas about the unhealthiness of the chemical trade, and so forth. During his considerable experience he had formed the opinion that, so far from the trade being unhealthy, the men engaged in it were equal, if not superior, in health to the men engaged in any other trade with which he had been brought into contact. He thought it would be well to have inspection centralised under some Government department, instead of entrusting larger duties to local authorities, whose interference had hitherto been for the most part of a petty and ineffective character.

The manner in which those authorities had dealt with the smoke nuisance did not inspire one with hope as to their fitness for the exercise of larger powers. In Manchester and Salford, for example, the manufacturers had been systematically harassed, and in some cases even driven out of the place, and yet the atmosphere was as filthy as ever—some said even more filthy.

It was a point he had often emphasised that fogs such as had been experienced during the week were caused almost entirely by domestic smoke, and these would never be abolished until domestic smoke was brought under police regulation, as in many Continental cities. In certain Continental cities the burning of bituminous coal was prohibited, with the result that there was a clear atmosphere, and he did not see why the same thing should not be done here. He did not wish it to be imagined for one moment that he was arguing for the continuance of the black smoke nuisance. From steam boilers there should not be any black smoke, but as to its suppression from certain furnaces he was decidedly of opinion that the present means were ineffectual, and radical changes would have to be made before any real good could be done. Failing the placing of the work of inspection and of the power to prosecute under a central authority, he suggested the appointment of a high technical authority to whom all the reports of the inspectors should be submitted, so that inquiries might be made, and that each case might be dealt with on its merits, instead of in the haphazard fashion at present prevailing.

Passing to the topic of sewage treatment, he said when the enormous sums that have been spent are considered, also the little good that has resulted, and the few reliable statistics that are available after the trials of a quarter of a century, one was tempted to inquire whether the subject had been attacked in the right way. It was an industry that had never tempted the right kind of industrial chemists. At present the man who attempts to solve the problem generally evolves his process first and learns his chemistry afterwards. He also criticised the present standards of purification adopted in the prevention of river pollution.

In connection with the subject of instruction in technical chemistry the speaker commented on several points of a controversial nature, but discredited the belief that the length and breadth of this land is a wilderness, and that to find the veritable land of Goschen it was necessary to travel to Germany. Everyone knew that Germany had an excellent and cheap system of scientific education, but he felt compelled to join issue with those who thought anybody could be made a compeer of those pioneer spirits who had revolutionised the world's methods, by the help of a little scientific instruction "made in Germany."

The Chairman then directed his remarks to the consideration German and American competition in the alkali trade. The figu which had been put before them, he said, showed that the trade was a very bad way indeed; that, in fact, it was approaching a peri similar to that of 1890, when many of the leading chemical manufa turers banded themselves together to amalgamate their works and fo a huge confederation. He ridiculed the idea that serious competi had to be feared from Germany. It was the low rates she paid her labour that enabled Germany to compete with us to the extent did at present, but the day was rapidly approaching when she wo have to pay her labourers much more reasonably, and then her of production would fall more nearly into line with our own. Un certain conditions we would have much more reason to fear the com tition of America. For a market for our heavy chemicals we were present largely dependent on the United States. But it must not forgotten that America was herself possessed of all the raw mater necessary in the chemical trade, while her coal, oil, and natural were only waiting for the development which the natural industry the inhabitants would not allow to remain much longer in repose was turning her hand to chemicals, with the result that she had alre made a sad mess of English prices.

Mr. Grimshaw, in moving a vote of thanks, expressed his app ciation of the address. It was not usual to discuss the opening addr and if it were he thought it would be necessary to devote the rest of meetings to the discussion for a long time to come, though this not because there would be many points on which they would disag

Mr. Grossman, in seconding the vote, stated his belief in the foolishn of blindly following the German schools. He thought most g would be done by paying attention to the production of manag thoroughly trained in science, and particularly to the formation chairs of chemical engineering.

After a brief response from the Chairman, the meeting terminated

LIVERPOOL SECTION.

The first meeting of the Liverpool section of the Society of Chemi Industry for the present session was held at University College Wednesday, 4th inst., when the chairman, Dr. Charles A. Kohn, g the opening address on the "Synthesis of Physiologically Active Orga Compounds." After referring to the important industrial develo ments of organic chemistry as one of the most marked achievem of modern applied science, Dr. Kohn reviewed the history of manufacture of synthetically prepared drugs such as antipyrine, a fibrine, phenacetine, sulphonal, and similar products, dating the w on this subject from Liebreich's discovery of the therapeutic value chloral in 1868. After considering in detail the chief work on relation of chemical constitution to physiological action in the prepa tion of narcotics, antiseptics, and antipyretics, the lecturer referred the position the manufacture of these products takes as an importa branch of chemical industry. From returns supplied from the ch hospitals in the country, he estimated the annual value of the produ used in the hospitals at £2,300., whilst in the Liverpool district alo the quantities sold outside the hospitals amounts to a value of £3,00 yearly. The total annual consumption in the country Dr. Kohn es mated at not less than £250,000. Referring to the fact that the products are practically all "made in Germany," he regarded this due on the one hand to the Government not offering those facili for the use of duty-free alcohol for chemical industries which exis abroad, and also to the lack of appreciation of organic chemistry in t chemical works of this country.

THE LOCAL GOVERNMENT BOARD AGAIN.—The Local Gover ment Board have written to the Swinton and Pendlebury Urb District Council declining to sanction a loan of £7,000. for the purpos of a drainage scheme for a portion of Swinton. There is already sewage farm of 32 acres where the sewage of the greater part of t district is treated, but the development of Sindsley, Broad Oak Par and Folly-lane, have rendered new works absolutely necessary. T Slack Brook sewage works at Pendlebury and the existing farm Swinton, together with purification works, were carried out by the L Local Board, and the amount of the loan obtained for the purpose exceeded by £2,000. The District Council have sought a loan for t payment of this amount, but the Local Government Board have refu it; and it will now require to be paid out of the rates. The Loc Government Board also recommend the purchase of 125 acres of la in connection with the proposed new scheme at Swinton. The Distr Council, however, view this as a monstrous proposal, 125 acres bei four times the size of the existing farm, and say that it would, if carr out, entail an annual expense of about £1,800., which would be equ to a 6d. or 7d. rate. The district Council, have just completed i provements at Slack Brook works, Pendlebury, to avoid difficulties w the Mersey and Irwell Joint Committee.

Legal Intelligence.

HIGH COURT OF JUSTICE.

QUEEN'S BENCH DIVISION.

Before Mr. Justice Grantham and Mr. Justice Wright.)

FOWLE, APPELLANT—FOWLE, RESPONDENT.

was a case stated by justices for Kent, sitting at Cranbrook, who ed an information of the appellant, Thomas Fowle, against the lent, Thomas Albut Fowle, for that he on February 7, at , did unlawfully sell to the prejudice of the purchaser a certain called or known as beeswax which was not of the nature, ce, and quality of the article demanded, containing about 50 eswax and 50 parts foreign matter -to wit, paraffin. The facts ese. The appellant's agent went to the shop of the respondent, r, and asked for a quarter of a pound of beeswax, and the lent supplied him with the quarter of a pound of beeswax, stating could not guarantee that it was pure. The appellant's agent "But you sell it as beeswax," and the respondent said, "Yes." vas no label on the beeswax. The public analyst certified that swax was, in his opinion, adulterated beeswax, or that the contained 50 parts beeswax and 50 parts paraffin By the Sale and Drugs Act, 1875, the term "drug" includes medicine for and external use. The justices found (1) that prepared bees- own as "yellow wax" (with the bleached preparation known ite wax") is a substance mentioned in the "British Pharma- ," and is used in the preparation of certain medicines; (2) that is used in the preparation of medicines as a vehicle only, and ossessing any healing or medicinal properties, and that the sale wax by the respondent to the appellant was not, in their opinion, f beeswax to the prejudice of the purchaser, because of the nt made by the respondent to the appellant's agent, though the supplied was not of the substance, nature, and quality of the riginally demanded by the appellant; (3) that the sale of the eswax by the respondent to the appellant was a sale by the lent as a grocer. They held that beeswax is not a drug within ning of the Act, and that if it is a drug the sale was not a sale rejudice of the purchaser, nor was the sale by the respondent, r, a sale by him of a drug within the meaning of the Act, and smissed the information. The questions for the opinion of the were—(1) Is beeswax a drug within the meaning of the Act? s the sale of beeswax a sale to the prejudice of the purchaser? ea, was the sale of beeswax by the respondent, a grocer, the a drug within the meaning of the Act?

T. Mathew appeared for the appellant and submitted that yellow d beeswax were substantially the same thing. If so, it was ry to turn to the Act to see if yellow wax were within the on of a "drug." The definition was not exhaustive, but beeswax ithin the definitions given in Johnson, Webster, Skeat, and ers. Beeswax was also mentioned in the "British Pharma- ," which was made evidence by the Medical Act, 1862. "Sands ll" (3 Q.B.D., 449) showed that the statement of the seller was icient to prevent the sale being to the prejudice of the purchaser. Justice Grantham said that, speaking for himself, he could not that beeswax was a drug. By going to the dictionaries and g the definitions no doubt it would be possible to bring bees- thin some of them. Every one could think of instances where x was used not as a drug It was sold by a grocer at a little shop. The grocer did not make it. He said he did not know s constituents were. The justices were right.

Justice Wright concurred. In many cases it was a question of to whether an article was a drug or not, and the justices had hat it was not in this case. Whether the sale was a sale to the ce of the purchaser was a most important question, but it was essary to decide it, and he did not decide it.

eal dismissed.

CHANCERY DIVISION.

(Before Mr. Justice Stirling.)

ATTORNEY-GENERAL V. MAYOR, &C., OF PRESTON.

Lordship gave judgment this week in the above case, which ard during the last sittings. It was an action brought by the ey-General at the relation of the rural District Council of Preston the mayor, aldermen, and burgesses of the county borough of n and a Mr. Allsup, the tenant of the borough sewage farm, to restrain the defendants from receiving, treating, or distributing on a farm called Freckleton Farm so as to cause a public ce. Freckleton Farm contains 557 acres and is situated three or iles from Preston on the north side of the river Ribble, to which frontage of nearly a mile. The district of the relators was on ith side of the river and was in part immediately opposite the farm. In 1889 an inquiry was held by the Local Government Board as the result of which the Corporation were authorised to borrow a sum of £83,000. for the purposes of a scheme for conveying the sewage of the borough to Freckleton Farm to be there disposed of; and subsequently a further sum of £32,500. for the purpose of adapting the farm to be used as a sewage farm. Both these sums of money have been raised by the Corporation and applied by them for the purposes above mentioned. The sewage of Preston was first turned into the farm in August, 1893, and has continued ever since to be so dealt with. In 1894 complaints began to be made by persons living within the district of the relators that this deposit of sewage was causing a nuisance, and, after some correspondence between the complainants and the town clerk of Preston, this action was commenced on March 28th, 1895. The plaintiffs did not complain of the violation of any specific statutory enactments, but they contended that the defendants were not entitled to dispose of the sewage of Preston in such a way as to cause a public nuisance. The defendants denied that they had so acted as to call for the interposition of the Court by way of injunction.

Mr. Hastings, Q.C., Mr. Macmorran, Q.C., and Mr Sutton appeared for the plaintiffs; and Mr. Cozens-Hardy, Q.C., and Mr. Danckwerts for the defendants.

Mr. Justice Stirling, in giving judgment, said that no case of injury to property was alleged, but it was said that the acts of the defendants caused injury or danger to the health of the inhabitants of the plaintiffs' district, or, at all events, seriously affected their comfort. After dealing with the evidence on these points, he came to the conclusion that no case of injury to health was made out, and that there had not been any such interference with comfort as to entitle the plaintiffs to an injunction. In his opinion, however, it was established that down to the commencement of the action, and for some time subsequently, the defendants had adopted a mode of dealing with the sewage which was likely to cause nuisance. He could not doubt that in the autumn of 1894 the smells caused considerable discomfort to some people in the enjoyment of their houses, but the evidence showed that during the years of 1895 and 1896 this interference with comfort had been much less serious than in 1894, and from whatever source it might have proceeded it had not during those years exceeded that which was frequently caused by some very ordinary agricultural operations. The law as to the granting of injunctions in cases of nuisance was concisely stated by Lord Justice Turner in "Swaine v. Great Northern Railway Company" (4 De G. J. and S., 211) in these terms:—"Occurrences of nuisance, if temporary and occasional only, are not grounds for the interference of the Court by injunction except in extreme cases." That was a case of private nuisance, but the same doctrine was applied to public nuisances in the case of "A. G. v. Sheffield Gas Company" (3 D. M. and G., 304) and "A. G. v. Cambridge Gas Company" (L. R. 4, Ch. App. 71). The present case was brought within that principle, and consequently the action must be dismissed; but, having regard to all the circumstances of the case, it would be dismissed without costs.

GOLD OUTPUT IN THE RAND.

THE output from the Rand district during October, as cabled by the Witwatersrand Chamber of Mines, amounts to 163,919 oz. This total, however, is exclusive of the returns of several companies which, under the title of the "Association of Mines of the South African Republic," give their joint output as 35,970 oz. The month's production is, therefore, 199,889 oz., and shows a decrease of 2,672 oz. as compared with the previous total, and an increase of 7,237 oz. as compared with the corresponding month of 1895. The following table gives the monthly returns since the beginning of 1892:—

	1892.	1893.	1894.	1895.	1896.
	oz.	oz.	oz.	oz.	oz.
January	84,560	108,374	149,814	177,463	148,178
February ..	86,649	93,252	151,870	169,295	167,018
March	93,244	111,474	165,372	184,945	173,952
April	95,562	112,053	168,745	186,323	176,707
May	99,436	116,911	169,773	194,580	195,008
June	103,252	122,907	168,162	200,941	193,640
July	101,280	126,169	167,953	199,453	203,873
August.....	102,322	136,069	174,977	203,573	213,418
September..	107,852	129,585	176,707	194,764	202,561
October....	112,167	136,682	173,378	192,652	199,889
November..	106,795	138,640	175,304	195,218	—
December..	117,749	146,357	182,104	178,428	—
Total..	1,210,868	1,478,473	2,024,159	2,277,635	1,874,244

PERSONAL.—Mr. J. J. Forrester, of Bryanstone, Blandford, has been appointed manager of the Royal Agricultural Society's experimental farm at Woburn, in succession to Mr. C. H. B. Cane who has resigned.

Reports of Companies.

LIVERPOOL NITRATE CO., LTD.

The directors, in their report for the twelve months ended June 30th last, state that the profit and loss account shows a balance of £24 925, from which has been carried to depreciation account £1,977., leaving a balance of £22,948. Adding balance of profit and loss from previous account of £64,356, there is a total of £87,304, out of which there has been added to reserve fund £10,000, and dividends paid equal to 30 per cent., leaving a balance of £44,304., out of which the directors propose to pay a dividend on November 19 of 10 per cent. (being at the rate of 25 per cent. for the year), carrying forward to next account, pending settlement of the claim against the Chilian Government, amounting to $123,443., the balance of £33,304.

COLORADO NITRATE CO, LTD.

The directors, in their report for the twelve months ended June 30th last, state that the profit and loss account shows a balance of £2,233, from which has been carried to depreciation account £385, leaving a balance of £1,847.; adding balance of profit and loss from previous account, £12,933., there is a total of £14,781., out of which a dividend of 2½ per cent was paid on November 29, 1895, leaving a balance of £10,781, which the directors propose to carry forward to next account, pending the settlement of the claim against the Chilian Government for $59,936. The unfavourable result of the year's trading is due to the exceptionally low prices at which the nitrate produced had to be realised, and to the cost of production resulting from the very small output to which, in view of the low prices, it was judged advisable to limit the production.

CLEVELAND SALT CO.—The ninth annual report of the directors of the Cleveland Salt Company, Middlesborough, states that the demand for salt has decreased. The profits available for distribution amount to £3,405 16s 9d., and the payment of a dividend is recommended of 6 per cent on both preference and deferred shares.

THE DALMENY OIL CO., LTD.—At the meeting reported last week, it was finally decided that the dividend for the past year should be at the rate of 20 per cent per annum. It was unanimously agreed to reconstitute the present company, and for that purpose to incorporate a new company, to which the undertaking would be transferred.

THE LOGWOOD INDUSTRY.

ACCORDING to advices from British Honduras there is a considerable feeling of uneasiness and insecurity at Belize just now, arising chiefly from the low price of logwood, combined with the near approach of the Christmas hiring-season, when thousands of logwood-cutters are let loose in Belize from their 11 months' exile in the bush. Early in this year as much as $27. (gold) a ton was paid in Belize for logwood; now the price is $12, and may go lower before the labourers come in. The result is obvious. Either the labourers must accept about half their present wages, or logwood-cutting, which is practically the only paying industry here, must cease. Serious rioting took place at Belize in the hiring season of 1894-5, because Belize merchants were offering some 60 to 80 cents. in gold as the equivalent of silver in the dollar, which had been demonetised by the Government during the previous October, just two years ago, although the silver dollar was then, as now, worth scarcely 50 cents. of the gold standard. What may happen in December, 1896, if merchants venture to offer a reduction of 50 per cent., or even 25 per cent., on present wages, it is impossible to say. On September 30th a proclamation was issued by the Government prohibiting for twelve months the export of coastwise carriage of arms, ammunition, or gunpowder, without licence, and since then 50,000 rounds of rifle ammunition, consigned to a local merchant, have been seized by the Government, possibly in view of the uneasiness above mentioned, or the rumoured possibility of the utilisation of this colony as a base for the Cuban filibusters.

A correspondent, however, writing to the *Glasgow Herald*, says:—I read with amazement the misleading advices forwarded from British Honduras regarding the logwood industry. My firm is one of the largest buyers and exporters of logwood in the colony. By advices received under date 23rd October we were buying the article at from $18. to $24. gold according to quality. Four days after Reuter's Agency advised as above $12·00. gold as the price per ton, my firm bought as follows in various lots:—

	Tons.	Cwt.	Qr.	
October 19	58	2	2	at $24. gold.....good quality.
	8	12	2	at $20 gold.....middling.
October 20 to 22 ..	4	12	2	at $18. gold.....branchy.

Logwood is paid for in cash as soon as weighed, or its value is credited to contractors against advances. From *The Times of Central America*, published at Belize, you will see the market rate of 16th October, for logwood delivered at Belize, to have been $19. to $21. per ton. This paper is entirely (or claims to be) in the interest of the working classes, and has always been against the exporting houses, which makes it highly improbable that figures given by it should overstate the price. My advices say nothing about "a feeling of uneasiness and insecurity at Belize just now." Mahogany cutting pays better at present than logwood, and no doubt a good number of the labourers presently cutting logwood will be hired for the mahogany works in the next season. Last two years at the Christmas season one or two gunboats have been sent from the Jamaica Station to Belize, remaining until the hiring season was over. The same will no doubt again be done this year. It is a wise and necessary precaution in the light of the labour troubles of 1894-5. The station is a healthy one, probably more so than Kingston (Ja.), the harbour is commodious and safe, and the Belize residents very hospitable. There is a large quantity of Honduras logwood lying unsold at Goole and elsewhere, and you will understand that logwood could be bought at $12. per ton in British Honduras, it could be sold at much lower prices than we are asking at present.

THE GAMBLE INSTITUTE, ST. HELENS.

AT St. Helens, Lancashire, last week, the Earl of Derby opened the Gamble Institute, which contains a library and technical school built by Colonel Gamble, C.B., at a cost of about £30,000, and presented by him to the town. The institute is a large and handsome building of terra cotta and red pressed brick, and it has the advantage of frontages to three streets—Corporation-street, Hardshaw-street, and Bickerstaffe-street. The principal entrances are from Hardshaw-street. The library occupies the whole of the ground floor, while the basement is devoted to manual training, such as engineering and plumbing, and has a metallurgical laboratory fitted in the most complete manner. The engine and dynamo-house is an adjunct of the engineering department. On the first floor there is accommodation for various technical classes, a laboratory and lecture room, a geometrical drawing room, and a cookery and laundry department. The second floor is devoted to the chemical and art departments, and contains a spacious laboratory.

ELECTRIC INDUSTRY IN THE UNITED STATES.

IN the electric-lighting field, the total capital invested in the United States is given as over five hundred million dollars. The number of plants, public and private, is over ten thousand. The number of motors in use is estimated at about five hundred thousand, and their value at about one hundred millions. The electrical apparatus used in mining is estimated at one hundred millions, and the value of the electric-elevator industry will probably not fall short of fifty millions.

The most important of all the electrical industries, however, is that of electric railways. In the field this investment is very great, and in the United States is represented by a capitalisation of over seven hundred millions. The number of trolly cars in use is said to be over twenty-five thousand, and these run on over twelve thousand miles of track. The electric railways represent more than ninety per cent. of all the street and suburban railroads of the country. The aggregate of all the capital invested in electric lighting, electric railways, and electric power is about fifteen hundred millions, and this does not include the value of the establishments that manufacture the machinery and apparatus. As many of these are among the largest industrial enterprises in the world, and as nearly all are concerns of considerable magnitude, it is very evident that their combined capital will run up into large figures. Inasmuch as the electric-light and power industry represents an investment of about fifteen hundred millions, without counting the value of the concerns that manufacture the machinery and supplies, it is evident that to estimate the total investment in every department of the electrical industry at two thousand millions of dollars in the United States alone, is not extravagant, for this would allow only five hundred millions to cover the value of the telegraph, the telephone, and the almost unlimited number of electrical manufactories large and small, that can be found, from one end of the land to the other.

MILK ADULTERATION.—At the Manchester City Police Court, on Wednesday, Joseph Mycock, farmer, Miller's Dale, was fined 40s. and costs in respect of two summonses for supplying a local dealer with milk which upon analysis was found to contain 7½ and 12½ per cent. of added water. The defendant pleaded that becoming short he got the milk on question from a neighbour.

Correspondence.

t do not hold ourselves responsible for the opinions expressed by our correspondents.

HE PREVENTION OF GASEOUS POISONING.

(To the Editor of the Chemical Trade Journal.)

—I have perused with very great interest your article and descrip-ion "Gassing," and the means of preventing the ill-effects thereof. ot hesitate to say that you have done chemical manufacturers at ood service. My firm has always kept appliances, surgical, l and otherwise at hand in case of accident, and I shall be glad if ll send three copies of the rules, to be posted up in various parts firm's works. "A stitch in time saves nine" is true in this as of others.—Yours truly, THOMAS TYRER.
ing Chemical Works, Stratford, London, E.

Selected Correspondence.

SMOKE AND SEWAGE STANDARDS.

To the Editor of the Manchester Guardian.

—The average Briton has a habit of expecting from a body of :ting collectively a higher executive efficiency than that of the e of its individual units. As a matter of fact, the result is lly a long way below what we might depend upon from the average mponents. We need not go further for an illustration of this than :cord of the proceedings of the meeting of the Joint Committee nday last week. Where is the hope for the future or guidance for esent, culled from experience of the past, to be found in the of the Consultative Committee which we have been expecting shed the much-needed light in dark places? "Words, idle " are what we get. What the directors of the Ship Canal, the uthorities, and the manufacturers literally yearn for is advice, ce, assistance; but the Committee, as in the days of old, fill p with "the east wind." No doubt 1,000 samples have been d, no doubt soluble putrescible matter and secondary decomposi-e very interesting (they are to me as a chemist), but say I am a icturer, or a sewage board or other malefactor, what does mean to me? I want to know what amount of purification tisfy the Committee, what method of treatment will be accept-in short, what is considered "the best practicable and available " I have on occasions sat and heard an unfortunate producer ke, anxious to do his best to minimise the same, request the ester Corporation to assist him by telling him what standard ked as to freedom from black smoke. "We have no standard," e Corporation. "Then you ought to have," said the evolver of ; "how else can I know where I am?" Says the Corporation to nt Committee, "What is the standard you fix for sewage effluents into the Irwell?" "We have no standard," replied the Joint ittee. "Then you ought to have," says the Corporation, forget-turally, of its own attitude towards the smoke maker.

re can be no doubt that it is high time a standard adapted to the t practicabilities of the cases, should be laid down both for and sewage, and it is become an unworthy fencing with the n for these bodies to pretend that such cannot be done. The s of the community more immediately interested should combine that it is done. One of the main pleas for the speedy improve-of the river Irwell has always been the condition of the Ship whose chairman called attention to the fact that 200,000 tons of and sewage sludge had been brought into the docks by the recent

This 200,000 tons is not soluble organic matter. It is sand, , and the solid matter of sewage, the last-named being probably he smallest in weight and amount; and I venture to say that ythell will put up for a little while longer with the "soluble ible matter" if you will save him the expense of dredging up the o tons of detritus.

I unduly tax your space, I conclude by directly traversing the ent that it is impossible to produce an effluent fit to enter the Ship by precipitation and aëration. It is possible to do this without reas of oxidising filters. It is being done at Glasgow, at the rnock Works, from which works I am informed they do not plate making any culvert to take the effluent to tidal waters. I that Manchester can obtain cheaper materials for precipitation lasgow. The inference from all this is that if Manchester were l to construct the suggested culvert, which would cost, say, half on—that is, double the estimate—the blame would not be upon nan Thompson and his Committee, but on the Joint Committee, h their impracticable attitude on the question of the standard of —Yours, &c.,

HARRY GRIMSHAW, J.P., F.C.S.

THE JOINT COMMITTEE AND STANDARDS.

DURING the further discussion of the Manchester sewage-effluent disposal scheme, at the meeting of the General Purposes Committee of the City Council on Thursday, Mr. Bowes urged that something should be done to compel the Mersey and Irwell Joint Committee to accept the effluent which was being produced at the present time. He had been down to the sewage works, and to his mind the effluent was perfectly good enough. (Laughter.)

Mr. Alderman Clay: In appearance.

Mr. Bowes: Yes, in appearance. He thought the persecution that was going on at the present time was simply ruining our industries and impoverishing large numbers of the ratepayers of Manchester. Something should be done to get the Committee to reduce their standard, which was too high. Mr. Alderman Clay told them some time ago that the Committee had no standard.

Mr. Bowes said the Joint Committee had neither the courage nor the ability to put on paper what they wanted. The Corporation had to produce the best they could, and by a joint conference he thought they should endeavour to bring the Mersey and Irwell Joint Committee to a reasonable frame of mind. At present he thought they were most unreasonable.

Trade Notes.

SALT TAX IN BRAZIL.—Advices from Brazil report certain fiscal changes which will include an increased tax on salt, which aims at putting money into the pockets of some salt makers up the coast.

ANOTHER OIL VICTIM.—The danger arising from the use of common lamps and bad oil has been shockingly illustrated at Lower Sydenham. A lady of seventy-five years of age, named Mary Ann Hone, was handling a cheap lamp, when it overturned and the oil set fire to her clothing. She died from burns shortly after her removal to the hospital.

HE HAD THOUGHT IT OVER.—According to a story, to which currency has been given by the *Financial News*, a certain nobleman evidently knows a thing or two about mines. He was recently invited to go out to the Rand and become local manager of a deep-level enterprise. "Thanks, awfully," said he; "but I would rather stay here where the gold comes from than be out there where it goes to."

ELECTRICAL AND ENGINEERING EXHIBITION AT NEWCASTLE.—Arrangements are now actively in progress at Newcastle-on-Tyne for the opening there in February next of an Electrical and Engineering Exhibition, which, among other purposes, is to commemorate the 60th year of the Queen's reign. It is proposed to illustrate the changes and developments that have taken place in electrical, engineering, and other leading branches of industry since 1837; but the promoters will also do what is possible to make the building and its surroundings attractive as a place of public resort. In the first division of the exhibits there will be departments for electricity, shipbuilding, and sea industries, machinery and products, self-propelled conveyances, and machinery. Division II. will comprise education and instruction; *science and chemistry*; furniture and accessories; *sanitation*, medicine, hygiene, and public relief; heating, lighting, and ventilation; textile fabrics, etc.; alimentary products; horticulture; women's industries, and the fine arts.

THE USE OF CARBURETTED WATER GAS.—At Stockport, on Wednesday, Colonel Hasted, R E., conducted a Local Government Board inquiry into an application by the Stockport Town Council to borrow £43,000. for gasworks purposes. The Gas Committee, amongst other things, have decided in favour of a carburetted water gas plant, to relieve the great pressure on the existing resources. The Inspector read a letter which he had received from Mr. J. Haddock, of Adswood, manufacturing and analytical chemist, protesting against forcing upon householders, without their consent, a gas having "acknowledged poisonous properties." Mr. A. Cartledge attended, and said he also objected; the poisonous gas in the water gas was absolutely fatal to life. The Inspector: You mean you should not be experimented upon. Mr. Cartledge: Yes, it is a great danger. The Inspector said £600,000. was being spent in Birmingham on this gas; and other gentlemen added that a plant was being laid down at Southport, and the gas was in use at Liverpool. The Town Clerk said in practice the objections to water gas had never been found to be serious. At present it was only proposed in Stockport to use about 25 per cent. of water gas as a mixture. The Gas Engineer (Mr. Meunier) said that no one disputed the danger of carbonic oxide poison associated with water gas, but the objections raised were theoretical. If this water gas was left turned on in a room the smell would be so powerful in three minutes that any inmate would have to leave the room or turn the gas off. The Inspector said the points as to the harmful effects of the gas had been so often before the Local Government Board that it was not necessary to go into them that day. Mr. Meunier: The danger is no greater than that from ordinary coal gas.

NITRATE STATISTICS.—The Permanent Nitrate Committee's public statistical circular for November states:—"Nitrate of soda—Total exports to Europe, October, 2,632,000 quintals; loading for Europe, November 1, 1,862,000 quintals; imports, Europe, October, 50,290 tons; deliveries, Europe, October, 33,585 tons Visible supply, Europe, November 1st—Stocks and afloat, 550,860 tons."

THE SALT AND CHEMICAL TRADES.—On Thursday, 70 more workmen at the chemical works of Messrs. Brunner, Mond and Co., Ltd., Northwich, were discharged, joiners, fitters, and bricklayers being included in the number. This incident, coupled with the fact that the salt industry is in a most depressed condition, makes the outlook for the winter in mid-Cheshire gloomy in the extreme.

THE DISPOSAL OF THE HEATH TOWN SEWAGE.—We learn that the Local Government Board have sanctioned the scheme which has been laid before them for dealing with the sewage of Heath Town. The question was dealt with at a Local Government inquiry some time ago. It is proposed to treat the sewage on the broad irrigation principle, and it is anticipated that the cost of laying the sewers and carrying the sewage to the farm at Coven will amount to about £12,000. Tenders for the work will be asked for immediately.

DUTCH MADDER.—Messrs. Bunge and Co., of Rotterdam, report as follows:—Fine crop, 25s. to 27s. per cwt. in original butts; small crop, 2 s. to 23s. 6d.; fine ombros, 36s. to 39s.; good ombros, 33s. to 34s. 6d.; small ombros, 31s. to 32s.; regrounds, 30s to 38s.; mulls, 5s. to 6s; roots, 34s.; garancine, 50s. to 67s. During the last few weeks there has been a very good demand, and several casks of new 1896 madder have found ready buyers. The quality is very good compared with former years, so that holders of 1893 and 1894 lots are very willing to clear, and would accept low prices.

SALT SHIPMENTS TO EAST INDIES.—Mr. Thomas Higgins, in his monthly report of the shipment of salt to the East Indies, says that the clearances for Calcutta from Liverpool from January 1st to October 31st amounted to 106,114 tons, and from other ports, 50,407 tons. The clearances from Liverpool for the same period last year amounted to 159,094 tons, compared with 216,535 tons in 1894, and 148,343 tons in 1893. The clearances from Liverpool for other Indian ports were 16,282 tons, and from ports other than Liverpool 1,850 tons. The probable clearances for November are estimated at about 11,300 tons.

THE SUGAR INDUSTRY OF THE WEST INDIES.—A gentleman, recently returned from the West Indies, where he has been making special inquiries about the sugar trade, has given it as his opinion that nothing but a continuance of low prices will rouse the sugar planters and crushers from their laziness and apathy. It will stimulate them to turn their attention to new methods and new machinery, whereas if sugar should go up in price they will dawdle along as so many of them are doing now, only to be nipped again the moment sugar falls. There should be money to be made out of the West Indian Islands by enterprise and sound judgment, despite the beet sugar competition of Europe.

TEETOTAL BEERS.—At the West Riding Court, Leeds, this week, a Halton shopkeeper named Charlotte Ibbotson was summoned for selling beer without a licence. A bottle of beer, on analysis, was found to contain 4·1 per cent. of alcohol. The limit fixed by Act of Parliament for these non-intoxicating beverages is 2 per cent. Defendent, who, through her son, pleaded ignorance, was fined 2s. 6d., including costs, the Chairman remarking that it was very undesirable that so-called non-alcoholic liquors should be sold which in reality contained as much alcohol as, at any rate lager beer.—At Heywood, near Manchester, on Wednesday, Robert Weaver, a maker of temperance beverages, was fined 5s., including costs, for selling fermented temperance drinks containing over 5 per cent. of alcohol, only 2 per cent. of spirit being allowed in such beverages.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Tar products as a whole are firmer, benzols excepted. Although the benzol quotations are lower, there is very little doing, and the following prices are virtually nominal:—90's, prompt 4s. 4d., December 4s. 3d., January-June 3s. 9d.; for 50/90's the price is still 3s. 1½d., prompt. Carbolic acids are firm, 60% crude being quoted 2s., an advance of 2d.; crystals, 40%, 7½d. Naphthas are steady, with crude at 1s. 3d. and solvent 1s. 6d., with a rising tendency. Creosote is firm at the advance. Anthracene, 30%, A 9d., and B 8d. Pitch flat and unpromising at 28s. to 31s., f.o b. East Coast

Sulphate of ammonia is improving in price very rapidly. The bulk of the buying, however, seems to have been done by speculators for "covering" purposes. Consumers, having doubted the stability of the advance, have been slow to follow the market. Nearest values are: Beckton £8. 5s. to £8. 10s., London outside makes £8. 2s. 6d., Liverpool £8., Hull £8., and Leith £7. 17s. 6d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade there is more activity generally, and in partic the demand from the United States has greatly improved, both caustic soda and bleaching powder. There are no important cha to record during the week in values of alkali (58%) or of caustic s and the latter is quoted as follows—f.o b. Liverpool, 77%, £8. 17s. 74%, £7. 17s. 6d.; 70%, £7. 2s. 6d.; 60%, £6. 5s. per ton, 10 lots and upwards. For bleaching powder price is firmer at £6. 10 £6. 15s., f.o b., for hardwoods, and £6. 7s. 6d. to £6. 10s., f.o.r., woods. Chlorates are unaltered—soda 5d. and potash 4d. per lb., with rather a firmer tendency. Recovered sulphur still steadi £4. 12s. 6d., f.o.r. For saltcake there is better inquiry, and s business doing at 19s. to 20s., in bulk, f.o.r. For vitriol and mur acids the demand is normal, and prices are without change. The more active demand for fertilizers. Nitrate of soda keeps stea 7s. 10½d. to 8s. per cwt. White powdered arsenic is a stro market, and price is advanced to £22. 10s. for spot delivery, higher prices quoted for forward. Aniline oil and salt remai prices of last week. Carbolic acids, crystals and crude, have adva in price. Brown acetate of lime is firmer for spot delivery, but small amount of business reported. Other acetates are generally Tartaric acid slightly lower. Potash, caustic and carbonate, still tinue in good demand at full prices.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants c at 48s. 4½d., Middlesbrough 40s. 3d. cash, and hematite 50s. Copper, quiet: Chili bars, G. O. B.'s and G. M. B's., close £49. 6s. 3d. to £49. 11s. 3d. cash, and £49. 18s. 9d. to £50. 3s three months. Tin, quiet: Straits closed at £58. 13s. 9 £59. 3s. 9d. cash, and £59. 10s. to £60. three months; Austra £60. 12s. 6d.; English ingots, £63. Lead: Spanish, £11. 7s to £11. 8s. 9d.; English, £11. 10s. to £11. 12s. 6d. Silesian spe ordinary, £17. 12s. 6d. to £17. 15s. Nickel 1s. 2¾d. Antim £29. to £29. 10s. Quicksilver: First hands, £6. 12s. 6d.; se hands, £6. 10s. *Copper shares*, quiet: Cape, 2$\frac{7}{16}$ to 2$\frac{5}{8}$; Cop 2$\frac{3}{4}$ to 2$\frac{1}{8}$; Libiola, 1$\frac{15}{16}$ to 2$\frac{1}{16}$; Mason and Barry, 3 to 3¼; Tinto, 25 to 25⅛; Tharsis, 5¾ to 6.

REPORT ON MANURE MATERIAL.

A fair business continues to be done, but buyers move cautio and reluctantly pay the higher prices demanded. The positon mineral phosphates is unchanged, and quotations remain as reported. Extreme rates of freight continue to be exacted, and certain cases contracts for rock are being carried forward for shipm next season in the hope that lower rates of freight may then obtainable. There is nothing reported in River Plate bones, but nominal value may be put at £3. 16s. 3d. per ton. Crushed Kurra bones and bone meal offer at £4. per ton, for shipment, without find buyers. Bombay bone meal, December-January steamer shipm may again be had at £3. 17s. 6d. per ton, and January-February £3. 18s. 9d. per ton. Common bones are inquired for, and the v is £3. 15s. to £3. 17s. 6d. per ton, according to quality, ex s Liverpool. Nitrate of soda is firm at the advance, 8s. per cwt. good, up to 8s. 1½d. per cwt. for refined, being required for s Due cargoes, ordinary quality, are worth about 7s. 10½d. per cwt., October-December shipments 8s. to 8s. 3d. per cwt., according position.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDA

OILS.—With the exception of Lagos palm oil is quiet, but inquiry for Lagos has been fairly good, and business is reporte £22. 10s. transit. Olive is strong and active, there being a g business passing. Linseed is down again, Liverpool makes in ex casks now selling at 17s. 3d. to 18s. 6d. per cwt. according to qua There is no change in cotton-seed as far as regards Liverpool refi which is quoted at 16s. 9d. to 17s. 3d. per cwt. American, howe is firmer, being well held for 18s. 3d. per cwt. Castor oil is v firm and scarce. All offerings of good seconds Calcutta at 3 have been cleared, and sellers are now holding for 3 Madras is dearer, at 3⅜d, but there is still a small quantity of pressure French offering, at 3½d. per lb. There is nothing fres report concerning tallow. Resin keeps firm, and spot prices a Common, 6s. 6d.; medium, 6s. 7½d. to 6s. 9d.; and fine, 7s. in per cwt. Spirits of turpentine are steady, at 21s. 9d per cwt., hol being firm thereat. Petroleum is very firm: American, 6⅜d. to 7⅛ and Russian refined, 5¾d. to 5⅞d. per gallon.

)URS.—Prices are steady, and practically without change, Oxfordshire, common, £10., medium, £12., best, £15. re, common, 40s.; medium, 50s., best, 60s.; Welsh, best, onds, 50s., and common, 18s.; Irish, Devonshire, 40s. to ench, J.C., 65s. Umber: 40s. to 45s. White lead, £16. l unchanged. Venetian red, £6. to £10. Cobalt: Pre- ide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, dium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

ing very like excitement prevails in the market for sulphate ia, and opinions as to the course of affairs in the immediate nflict greatly. Meanwhile an acceptable recovery has been nd prompt price to-day is between £7. 12s. 6d. and £7 15s., ecember delivery has been done at £7. 17s. 6d., and spring but makers generally look for not less than £8 10s. for the count, and may directly put up their views even higher. Sul- copper is stronger and dearer, and sulphur and refined alkali continued scarcity hold recent figures without effort. Oxalic borax and saltcake, are all a shade firmer. The other standard are all rather quieter if anything. In the section of mineral olid paraffins there is a fair business passing at prices un- ry to the makers. The exception is lubricating oil, which con- n.

prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; , 48/52°, £4. to £4. 15s. nett, Tyne; white alkali, 4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. sgow; caustic soda, white, 74° £8., 70/72° £7. 5s., 60/62° and cream 60/62° £6., all nett, Liverpool; bleaching £6. 12s. 6d. nett, Tyne; saltcake, 20s.; borax, English, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of wt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; te of potash, 4½d. nett, for Scotch and English deliveries (for ¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for d English deliveries (for export, 3½d. nett, f.o.b. Glasgow); of potash, 4d. less 5%, any port; nitrate of soda, 7s. 10½d. ; sulphate of ammonia, £7. 12s. 6d. to £7. 15s. prompt, f.o.b., alammoniac, first and second white, £37. and £35. nett, t; sulphate of copper, £16. 10s. less 5%, Liverpool; cale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1⅞d. per lb.; ax, 120° semi-refined, 1 15/16d. to 2⅛d. per lb.; paraffin spirit , 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and ½d., at Glasgow and other big centres, for Scotch buyers sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. nports of sugar at Greenock were 6,193 bags beet unrefined.

L PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

—The situation here has developed nothing of much import- ng the week. The supplies all round appear to be more than he demand. The arrivals of linseed have been heavy, reach- l import for the week of 54,505 quarters, making a total for of 721,357 quarters, against 573,774 quarters; rapeseed, uarters, against 128,308 quarters; cottonseed, 138,192 tons, 54,176 tons; olive oil, 15 270 casks, against 11,281 casks. It emembered, however, that this extra quantity has gone into ion, for very heavy stocks are being held, which will consider- k much development. Rape oil, 4,081 casks, against 6,9 o llow, 64,919 cwts, against 11,874 cwts.; turpentine, 15,429 gainst 17,997 barrels. Linseed oil has further declined about n, closing at 15s. 1½d., naked spot; November-December, 5s. 4½d.; January-April, at 15s. 10½d.; and May-August, Boiled and refined, £1. to £2. per ton extra. Export for has been 3,300 cwts. Refined cotton oil quiet, at 14s 6d., ot; November-April, 14s. 7½d. Casks, £1., and ordinary)s. per ton extra. Export for the week has been 3,160 cwts. turpentine, 21s. 9d. Castor oil firm at 3¼d. for first pressure, unchanged. Cod oils, £16 to £18. per ton. Bone grease, . Oleines, 94 to 97% saponifiable: White, £19. 5s.; pale, .; brown, £16 10s. per ton, c.i.f. Hull. Olive oil soap 60%, fatty acids, £16., c.i.f. Hull. Yorkshire grease, £8.; brown, £16. 15s.; pale, £19. 10s. f.o.b. Hull.

S.—Linseed cakes are in fair request at previous rates, 95% t £6. 7s. 6d. to £6. 10s.; Nov.-April, £6. 10s. to £6. 12s. akes, £5. 10s. Cotton cakes: The recent advance has ecked sales. Should the advance hold the demand will be s winter Best makes, spot dull, at £4. 10s.; December- . 15s to £4. Rape cakes unchanged.

PAINTS.—Prices are:—White and red leads, £16. and £14. per ton respectively. Mineral colours, £4. to £8. per ton; ready-mixed paints, much competed for, quoted £24. Imperial black varnish, £5. 5s. per ton in barrels; paint remover, 25s. to 30s. per cwt.

TYNE CHEMICAL REPORT.

TUESDAY.

There is very little alteration in the chemical trade, and dulness continues in most articles. Soda crystals, £2. 2s. 6d. per ton, gross weight locally. Caustic 76/77%, £9. to £9. 5s.; 70%, £7. 10s. to £7. 15s. per ton. Sulphur still scarce, at £4. 15s. to £5. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £5 per ton, nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s. 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham Salt is steady at 9s. per ton, f.o.b. Tees.

COALS.—Trade continues fairly steady, and Durham coals are now meeting with a good demand. Bunker coals are shipping freely and higher prices are being asked. Coke is firm. To-day's prices:—Best Northumbrian steam, 7s. 9d. to 8s. per ton; second qualities, 6s. 9d. to 7s. per ton.; small steam, 3s. 9d. to 4s. per ton. Bunker coals, strong, 6s 9d. to 7s. 6d. Gas coals, 6s. 9d. to 7s. per ton. Coke, 14s. to 15s. per ton.

New Companies.

Straits Settlements Ramie Fibre Co., Ltd.—CAPITAL £50,000, in £1. shares. This company has been formed to acquire the Macdonald-Boyle patents for the treatment of ramie or rhea fibre in the Straits Settlements, &c., and to carry on the business of ramie planters, &c.

New Carbide Syndicate, Ltd.—CAPITAL £2,400., in £10. shares. This company has been formed to acquire, develop, and turn to account a patent for the manufacture of carbide of calcium or other chemicals used in the manufacture of acetylene gas, and to adopt an agreement with J. H. H. Duncan.

O. Berend and Co., Ltd.—CAPITAL £20,000., in £1. shares. This company has been formed to carry on the business of electrical, mechanical, and general engineers, &c. The subscribers to the memorandum of association are: O Berend, Dunedin House, Basinghall-avenue, E.C., engineer; A. Landor, Dunedin House, Basinghall-avenue, E.C., merchant; A. Haywood, 5, Lime-street, E.C., merchant; J. B. Salvat, 52, Warlock-road, Paddington, W., clerk; C. H. Gregory, 36, Vaughan-road, Camberwell, S.E., gentleman; R. L. Fricker, 22, Sidney-road, Stockwell, S.W., engineer; W. B. Glascott, 11, Sinclair-road, Kensington, W., clerk.

J. C. Hamer, Ltd.—CAPITAL £50,000., in £5. shares. This company has been formed to take over the Hope Mills, Within's Mills, and Canal Mills, at Radcliffe, Lancashire, and to carry on the business of bleachers and dyers, &c. The subscribers to the memorandum of association are:—J. C. Hamer, Within's House, Radcliffe, manufacturer; R. Hamer, Chapel-street, Radcliffe, manufacturer; W. Wilson, Holland House, Blackpool, gentleman; A. Greenhalgh, The Oaks, Radcliffe, bleacher; H. Rostron, Lyndhurst, Whitefield, Lancs, manufacturer; J. E. Harrison, Luzley Brook, Royton, Lancs., manager; G. Fletcher, 115, Ainsworth-road, Radcliffe, Lancs., salesman.

Gazette Notices.

PARTNERSHIP DISSOLVED.

W. WINFIELD and B. PERREL, oil, colour, and varnish merchants, late Birmingham, now Smethwick, under the style of William Winfield and Co.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM

LONDON.

Week ending October 31st.

Acetic Acid—

Holland,	49 pks.	Phillipps & Grave
,,	108	R. W. Greeff & Co.
,,	72	A. & M. Zimmermann

Acetone—

Germany,	1 dm.	Stein Bros
Holland	1	A. & M. Zimmermann
,,	12 cks	T. H. Lee

Alkali—

Belgium,	100 c	T. H. Lee

Asbestos—

Italy,	£60	W. Byford
Germany,	30	Craven & Co.
France.	16	Girard Frs. & Co.
Italy,	353	London Asbestos Co.
Canada,	7,900	Elder Dempster & Co
Italy,	165	J. Barber & Co.

Barium Chlorate—

Ge many,	24 cks.	Petri Brs.

Barytes—

Belgium,	35 brls.	J. L. Lyon & Co.
Holland,	6 cks.	J. Parlevliet
,,	44	Taylor Brs
Belgium,	222 pks. 43 brls.	W. Harrison & Co.
Holland,	99 cks	,,
,,	37	F. G. Clifford

Borate of Lime—

Rosario,	3,956 bgs.	J. Purdy & Co

Caoutchouc—

France,	61 c.	H. Johnson & Sons
E. Indies,	24	L. & I. D. Jt. Co
Germany,	58	,,
E. Indies,	38	Ross & Deering
,,	26	Ralli Brs.
N. Russia,	160	S. C. D. Co.
France,	27	L. & I. D. Jt. Co.
B.W.I.,	20	Prop. Bull Wf.
Belgium,	1	Société John Cockerill

Carbolic Acid—

France,	14 cks	Blagden, Waugh & Co

Castor Oil—

E. Indies,	31 cks.	Ross & Deering
Italy,	20 cs.	A. & M. Zimmermann
E. Indies,	213	Montgomerie & Workman
Italy,	10	A. F. White & Co.

Caustic Potash—

France.	20 drs.	J. Barber & Co.
Germany,	5 cs.	Blondeau & Co

Chemicals (*otherwise undescribed*)

Germany,	£3	Craven & Co
Belgium,	86	Société John Cockerill
Holland,	118	T. H. Lee
,,	17	H. Lorenz
Belgium,	96	O. Scholzig
France,	75	A. Carey
U. States,	755	F. Parker
Germany,	32	H. Lambert
,,	389	T. H. Lee
,,	1,056	A. & M. Zimmermann
U. States,	705	E. T. Bales
Holland,	13	Little & Johnston
Germany.	198	L. & I. D. Jt. Co
U. States,	2,750	,,
Germany,	30	Perkins & Homer

Copperas—

Holland,	10 cks.	A. & M. Zimmermann

Cream of Tartar—

Italy,	20 cks	Howard & Sons
France,	2	H. Johnson & Sons
Italy,	9	Thamas S. T. & L. Co.
,,	2	W. C. Bacon & Co
Holland,	4	F. C. Devon & Co
,,	15	Kirkpatrick & Co.
France,	3	F. C. Devon & Co.
,,	5	M. Ashby Ld.
,,	20	Finlay & Co.
,,	5	C. F. Gerhardt
Spain,	9	B. & F. Wf. Co.
,,	1	C. Christophersen
,,	20	W. C. Bacon & Co.
France,	10	,,

Dyestuffs—

Annatto

Norway,	1 kg.	Johnsen & Jorgensen

Argols

Italy,	379 bgs.	B. Jacob & Sons
Cape,	8	J. R. Thomson & Co.

Cochineal

Canaries,	59 bgs.	Knowles & Foster
,,	12	W. M. Smith & Sons
,,	13	Kuhner, Henderson & Co
,,	70	Sperling & Williams
,,	5	Patry & Pasteur
,,	4	F. Huth & Co.
,,	27	Swanston & Co.
,,	6	J. W. Bouland

Cutch

Holland,	1 bs.	T. Simpson

Extracts

Austria,	100 brls.	A. J. Humphery
Belgium,	25	Leach & Co.
France,	75 cks.	L. J. Levinstein & Sons
Canada,	80	A. J. Humphery

Fustic

U. S. (Col.),	17 t.	W. Shelcott

Gambier

Germany,	258 bgs.	Beresford & Co.

Indigo

E. Indies,	24 chts.	L. & I. D. Jt. Co.
,,	3	Walker, Munsie & Co.
,,	4	Park, Macfadyen & Co.
,,	8	Parsons & Keith

Myrabolams

E. Indies,	585 bgs	Baxter & Hoare
,,	1,000 pkts.	A. B. Curtis & Co.

Shumac

Italy,	850 bgs	Ross & Deering

Tanners' Bark

Natal,	94 t.	A. & W. Nesbitt

Valonia

Brindisi,	31 t.	L. & I. D. Jt. Co
A. Turkey,	52	Hicks, Nash & Co.

Farina—

Germany,	50 bgs.	F. W. Harrison
Holland.	30	H. Lorenz
,,	700	R. Bennett & Co.
,,	50	Dunloo Brs. & Co
,,	200	J. Barber & Co.

Glucose—

U. States	102 pks.	571 c.	J. Keiller & Sons
Germany.	21	170 c.	J. Knill & Co.
France.	100	100	A. E. Piggott
U. States.	500	500	Deering & Robottom
,,	2,850	3,560	R. G. Hall & Co
,,	2,249	2,949	Pearce, Pelly & Co.
,,	500	500	Bellamy & Co.
,,	1,500	1,500	Robinson Son & Co
,,	300	300	Fellows, Morton & Co.
,,	250	250	T. L. Knight
Holland	50	50	J. Barber & Co
U. States,	250	250	Ohlenschlager Brs.
,,	250	250	L. & I. D. Jt. Co.
,,	50	305	Vokins & Co.

Glue—

Fiume,	£8	J. Harrison
Holland,	56	J. Owen
Belgium,	188	J. Barber & Co.
U. States,	25	Armour & Co.
Germany,	40	Bailey & Leetham
Italy,	140	Sander & Knott
Germany,	145	L. & I. D. Jt. Co.
,,	38	T. H. Lee

Infusorial Earth—

Germany,	250 bdls.	A. Haacke & Co.
Belgium,	110 bgs	W. Harrison & Co.
Germany,	£20	E. J. Brash

Litharge—

Germany,	1 ck.	J. Knill & Co.

Manure—

Germany,	30 t.	Ekman Pulp & Paper Co.
Belgium,	420	L. Sommerfeld
E. Indies,	415	A. Hunter & Co.
Germany,	17	A. J. Luke & Co.
Belgium,	180	Lawes Chemi. M. Co
Germany,	30	F. W. Berk & Co., Ltd.
,,	28	E. Groschke

Methyl Alcohol—

Germany,	12 dms.	Stein Brs.
,,	7 brls.	Sutton, Carden, & Co.

Mica—

U. States,	£40	C. F. Gerhardt
E. Indies,	85	E. Davis & Co.

Naphthaline—

Germany,	27 cks.	Fleming's Oil & Chemical Co.

Nickel Sulphate—

Belgium,	5 brls.	D. C. Thomas & Sons

Ochre—

Holland.	22 pks.	Phillipps & Graves
Italy.	6	T. Cartwright

Pearl Ash—

Canada,	10 c.	Charles & Fox

Phosphate Rock—

Belgium,	200 t.	Lawes Chemical Manure Co.

Pitch—

France,	36 brls.	Poth, Hille, & Co.
U. States,	66	Dussek Brs
Germany,	18	T. H. Lee

Plumbago—

Italy,	200 cks. 200 bgs.	J. Thredder, Son, & Co.
Germany,	30	D. Mendelsohn & Co.

Potash—

Canada,	302 c.	Charles & Fox

Potassium Bicarbonate—

France,	50 c.	A. & M. Zimmermann

Potassium Carbonate—

Germany,	95 c.	Petri Brs.
France,	115	W. E. Cole

Potassium Chloride—

Holland,	16 cks.	H. Johnson & Sons

Potassium Cyanide—

Holland,	63 cs.	G. Rahn & Co.

Potassium Sulphate—

Germany,	508 bgs.	Anglo-Contl. G. Wks.

Rosin—

U. States,	75 brls.	F. Nickels & Co.
,,	1 510	J. Knight & Sons
Germany,	15	L. & I. D. Jt. Co.

Saltpetre—

Germany,	46 cks.	P. Hecker & Co.
,,	86	L. & I. D. Jt. Co.

Soda—

Holland,	100 c.	R. W. Greeff & Co.
Belgium,	108	R. Waters

Sodium Acetate—

France.	8 cks.	J. Harrison
Holland,	60	H. Lorenz

Sodium Bichromate—

Germany,	54 cks.	A. E. Neale

Sodium Prussiate—

Belgium,	19 cks.	D. C. Thomas & Sons

Sodium Sulphate—

Germany,	250 bgs.	Jessop & Co.

Starch—

France,	10 cs.	Bennett S. S. Co.
,,	90	H. & F. Wf. Co.
Germany,	106	Phillipps & Graves
Belgium,	86	T. H. Lee
U. States,	100 bgs.	R. G. Hall & Co.
Holland,	100 cs.	Phillipps & Graves
Belgium,	276	F. Clayton & Co.
,,	140	Leach & Co.
U. States,	100 bgs	W. Taylor
France,	240 cs.	W. E. Cole
B.W. Indies,	60	Herms, Perm, & Co.
,,	160	Carey & Sons
,,	901	Little & Johnston
,,	60	Phillipps & Graves
U. States	195 brls.	Beck & Pollitzer
,,	300 bgs.	R. Warner & Co

Stearine—

France,	250 bgs.	G. Boor & Co.
N'foundland,	16 cks.	C. T. Bowring & Co.
France,	80 bgs	H. Walbaum & Tosetti

Sulphate—

Belgium,	99 cks.	O'Hara & Hair

Sulphur—

Italy,	295 t.	Union L. Co.
,,	25	Sowerby & Sons
,,	22	W. C. Bacon & Co.
,,	47	J. Greig
,,	282	G. Boor & Co.
,,	5	F. & L. Studer
,,	30	A. Zumbeck & Co.
,,	5	Taylor Brs. & Co.
,,	7	J. T. Morton
,,	5	F. Smith

Sulphur Chloride—

Holland,	20 pks.	Tyrke & King

Talc—

France,	£40	G. G. Blackwell, Sons, & Co.
E. Indies,	30	W. M. Smith & Sons
U. States,	80	C. Ward

Tar—

N. Russia,	1,920 brls.	Linck, Moeller, & Co.
,,	822	W. F. Malcolm & Co.

Tartaric Acid—

Holland,	4 cks.	F. C. Devon & Co

Ultramarine—

Germany,	20 cs.	Steinacker, Sons & Co
,,	7 pks.	H. Brooks & Co.
Holland,	20 cks.	Thames S. T. & L. Co., Ltd.
,,	90	Herms, Perm, & Co.
,,	1	W. Harrison & Co

Varnish—

Germany,	3 pks.	L. & I. D. Jt. Co.
U. States,	£30	Taylor Brs.

Verdigris—

France,	2 cks.	B. & F. Wf. Co
,,	2 brls.	C. F. Gerhardt

White Lead—

Holland.	58 cks.	T. & W. Farmiloe
Belgium,	26	26 brls. J. L. Lyon & Co.
Germany,	39	D. Sowerby & Sons
Holland,	20	Burrell & Co
Belgium,	50	,,
Germany,	22	M. Ashby, Ltd.
,,	12	S. Bowley & Son
,,	40	Randall Bros.
Holland,	90	A. & M. Zimmermann
Germany,	49	F. G. Clifford
Holland	20	W. A. Knee & Co.

Wood Pulp—

Germany,	51 bls.	H. C. Evered
Holland.	103 pks.	W. G. Taylor & Co.
Sweden.	240	,,
,,	5,922	Ekman Paper Co.
Germany,	793	E. J. & W. Goldsmith
,,	324	Tough & Henderson
France,	800	W. E. Cole & Co.
Norway,	1,640	J. Thorp
Sweden,	800	Morrison Cox Bros.
Norway,	1,023	Tough & Henderson
,,	4,623	E. J. & W. Goldsmith
Germany,	400	H. Lambert
,,	27	Thames S. T. & L. Co.

c Oxide—
ermany, 10 cks. R. W. Greeff & Co.
olland, 125 brls. M. Ashby, Ld.
. States, 200 ,,
olland, 100 J. Matton
c Sulphate—
ermany, 25 cks. City Coml. Wf. Co.

LIVERPOOL.

Week ending October 29th.

tate of Lime—
ew York, 870 bgs.
m Cake—
otterdam, 79 cks.
imony—
amburg, 3 cs.
enic—
tania, 20 brls.
e Meal—
mbay, 1,600 bgs.
acic Acid—
ghorn, 75 cks.
acite—
nderma, 950 t
tor Oil—
ghorn, 40 cs. 50 hf.-chts.
rseilles, 14 brls Mack & Sons
,, 18 318 23 cks.
micals *(otherwise undes.)*—
amburg, 10 cs.
ltimore, 84 cks.
Oil—
mburg, 20 cks
ours—
mburg, 5 cs.
tterdam, 1 5 tubs
onseed Oil—
w York, 100 brls. Kentucky Rifle Co
stuffs—
ochineal
Canary, 32 bgs. Roberts, Evans & Co.
Palmas, 18
Divi Divi
mburg, 200 bgs.
ustic
ita Arenas, 1,060 t.
on, 1,048 ps. Widow, Duranty & Co.
mpico, 1,933 H. Thompson & Co.
tagena, 119
yrabolams
nbay, 630 bgs. F. D. Sassoon & Co.
humac
ermo, 2,350 bgs. 75 bls.
,, 100 J. Kitchin, Ld.
na—
me, 172 bgs.
este, 100
mburg, 300 H. Tyrer & Co.
terdam, 50
ose—
w York, 200 brls. T. M. Duche & Sons
—
bles, 4 cks. 60 bgs.
terdam, 220 25 cs.
ien, 13 20 Co-op. W'sale Society, Ld.
p Black—
ladelphia, 140 bgs.
opone—
tin, 21 cks. P. Morris & Co.
ganese—
nburg, 10 cks.
ury—
terdam, 1 cs.
ral White—
me, 125 bgs.
um—
terdam, 47 cks.
sses—
Orleans, 1,500 brls.
e—
rseilles, 70 brls.
t—
ton, 22 cs. Leech & Co.
t and Varnish—
ladelphia, 13 pks.

Paraffin Scale—
New York, 1,600 brls. Thompson & Bedford
Philadelphia, 8
,, 850 Anglo-Am Oil Co., Ld.
Phosphate—
Terneuzen, 284 t.
Port Royal, 900
Pitch—
Copenhagen, 100 brls.
Plumbago—
Genoa, 80 bgs. G. Huntriss
Potash—
Hamburg, 60 cks.
Dunkirk, 23 dms J. Matthews
,, 1 107
Potassium Carbonate—
Stettin, 4 cks.
Pyrites—
Huelva, 5,347 t. Matheson & Co.
Rosin—
Ceara, 19 bgs. Rosing Brs. & Co.
Salt—
Hamburg, 549 cks. H. Tyrer & Co.
Saltpetre—
Hamburg, 60 kgs. 2 cks. 100 bgs.
Soap—
New York, 675 pks. qty.
N. Orleans, 473 brls.
Leghorn, 375 bxs. Weaver & Sterry
Marseilles, 24 cs.
Bordeaux, 1 qty.
Boston, 8 W. Foggett
Sodium Nitrate—
Iquique, 18,259 bgs.
Starch—
New York, 200 sks.
Rotterdam, 134 cs.
Stearine—
Bordeaux, 50 bgs.
Sulphur—
Catania, 86 cks. 643 bgs 132 brls.
Tallow—
Zarate, 260 pipes
New York, 215 tcs. Colby & Co.
N. Orleans, 150 W. W. Schultz
Campana, 39 cks.
Boston, 300 brls. Colby & Co.
,, 600 250 70 hds.
,, 675 Bigland, Sons & Co.
Baltimore, 125
Rosario, 5 cks. Hy. Ellison, jun.
B. Ayres, 536
Philadelphia, 100
Tartar—
Bordeaux, 23 cks.
Hamburg, 7
Tin Ashes—
Genoa, 105 bgs.
Treacle—
Bordeaux, 7 cs.
Turpentine—
Libau, 53 brls.
Ultramarine—
Hamburg, 1 cs.
Varnish—
Rotterdam, 2 cks.
Waste Salt—
Hamburg, 1,702 t.
White Lead—
Rotterdam, 61 cks.
Zinc Oxide—
New York, 20 brls.
Marseilles, 50
Zinc White—
Stettin, 100 cks. M. Ashby, Ld.

MANCHESTER.

Week ending October 31st.

Acetic Acid—
Rotterdam, 1 ck. 6 bins.
Alum Cake—
Rotterdam, 92 cks.
Ammonium Chloride—
Antwerp, 8 brls.
Aniline Colours—
Rotterdam, 55 cks. 28 cs. 9 bxs. 12 brls.
Aniline Oil—
Rotterdam, 13 cks.
Aniline Salts—
Hamburg, 5 cks.
Antimony Salts—
Rotterdam, 12 cks.
Blanc Fixe—
Hamburg, 21 cks.
Castor Oil—
Leghorn, 10 cs.
Chemicals *(otherwise undescribed)*
Rotterdam, 4 cks. 8 brls.
Hamburg, 20
Chrome Alum—
Rotterdam, 5 cks.
Chromium Chloride—
Rotterdam, 2 brls.
Colours—
Rotterdam, 8 cks. 5 cs. 16 bxs. 98 brls.
Dyestuffs—
Alizarine
Rotterdam, 186 cks. 3 cs. 2 bxs. 4 brls.
Logwood
Laguna De Terminos, 375 t.
Dyestuffs *(otherwise undescribed)*
Rotterdam, 2 cks.
Glucose—
Rotterdam, 4 cks.
Glue—
Rouen, 7 cks.
Treport, 10 12 bls
Antwerp, 10 pks.
Rotterdam, 1 15 bgs
Hamburg, 10 bskts.
Limestone—
Antwerp, 4 cs.
Mineral White—
Genoa, 1,300 bgs.
Ochre—
Treport, 36 cks.
Oxalic Acid—
Rotterdam, 30 cks.
Plumbago—
Genoa, 20 bgs.
Potash—
Treport, 111 cks. 42 dms.
Potassium Chloride—
Hamburg, 5 cks.
Pyrites—
Huelva, 1,672 t.
Salicylic Acid—
Rotterdam, 1 ck.
Soda—
Antwerp, 2 cks.
Sodium Nitrate—
Rotterdam, 8 cks.
Starch—
Rotterdam, 50 cs.
Antwerp, 212
Tartar—
Hamburg, 10 kgs.
Tartaric Acid—
Treport, 16 cks.
Tin Perchloride—
Antwerp, 4 cks.
Waste Salt—
Hamburg, 12 cks. 302 bgs.
Wood Pulp—
Gothenburg, 2,079 bls.
Hamburg, 600
Zinc Oxide—
Antwerp, 15 brls.
Rotterdam, 75
Zinc Sulphate—
Rotterdam, 2 brls.
Zinc White—
Rotterdam, 10 cks.

HULL.

Week ending October 31st.

Acetic Acid—
Rotterdam 9 blns. Hutchinson & Son
Arsenic—
Hamburg, 200 brls. Wilson, Sons, & Co., Ld.
Barytes—
Hamburg, 45 cks. Blundell, Spence, & Co.
Rotterdam, 22 Hutchinson & Son
Antwerp, 123 Bailey & Leetham
Rotterdam, 20 W. & C. L. Ringrose
Riga, 178 Wilson, Sons, & Co., Ld
Antwerp, 34 ,,
Castor Oil—
Antwerp, 6 cks. Bailey & Leetham
Chemicals *(otherwise undescribe.)*
Hamburg, 10 cks.
Stettin, 1 Wilson, Sons, & Co., Ld
Bremen, 1 cs. Pickering, Haldane, & Co
Antwerp, 17 pks. Wilson, Sons, & Co., Ld.
Cod Oil—
Christiansund, 6 brls
Colours—
Bremen, 2 cks. Veltmann & Co
,, 2 cs. W. H. Walton & Co.
Rotterdam, 2 2 W. & C. L. 118 pks. Ringrose
Hamburg, 1 A. Sanderson & Co.
Antwerp, 3 Bailey & Leetham
Cottonseed Oil—
New York, 115 brls. Wilson, Sons, & Co., Ld.
Cryolite—
Copenhagen, 3 cks. Wilson, Sons, & Co, Ld.
Dextrine—
Stettin, 100 bgs. Wilson, Sons, & Co., Ld
Dyestuffs—
Alizarine
Rotterdam, 11 pks. W. & C. L. Ringrose
Logwood
Hamburg, 50 bgs. Wilson, Sons, & Co., Ld.
Farina—
Harlingen, 250 bgs. W. & C. L. Ringrose
Stettin, 150 Wilson, Sons, & Co., Ld.
Glucose—
Stettin, 20 cks. Wilson, Sons, & Co., Ld.
Glue—
Christiansand, 2 cs Wilson, Sons, & Co., Ld.
Antwerp, 11 pks. Bailey & Leetham
Dunkirk, 9 cks. Wilson, Sons, & Co., Ld.
Hydrofluoric Acid—
Hamburg, 1 cs. Bailey & Leetham
Kaolin—
Amsterdam, 20 cks. Hutchinson & Son
Lead Acetate—
Hamburg, 1 ck.
Phosphate—
Dunkirk, 250 t.
Phosphate Rock—
Bona, 1,300 t.
Phosphoric Acid—
Bremen, 60 crbys.
Potash—
Hamburg, 20 dms. Bailey & Leetham
Antwerp, 2 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 59 pks. ,,
Saltpetre—
Hamburg, 10 kgs. Wilson, Sons, & Co., Ld
Starch—
Bremen, 2,258 cs. 1 brl. Veltmann & Co.
Ghent, 539 Wilson Sons, & Co, Ld.
Antwerp, 180 O. S. Stephenson & Co.
Stearine—
Antwerp, 21 bgs. Wilson, Sons, & Co., Ld.
Tallow—
New York, 183 brls. Wilson, 200 tcs. Sons, & Co., Ld.
Boston, 1,226 pks. ,,

Tartaric Acid—
Rotterdam, 2 cks. W. & C. L. Ringrose

Treacle—
New York, 852 brls. Wilson, Sons, & Co., Ld.
Boston, 375 "

Turpentine—
Antwerp, 195 brls. Runton Brs.
Brunswick, 1,705 G. & J. Rawstorn, Ltd.

Ultramarine—
Rotterdam, 1 cs. Hutchinson & Son
Bremen, 26 cks.

Varnish—
Antwerp, 3 cks. T. F. Chambers & Co.

Waste Salt—
Hamburg, qty. Bailey & Leetham

White Lead—
Rotterdam, 64 cks. Hutchinson & Son
Amsterdam, 23 "
Dunkirk, 36 brls. Wilson, Sons, & Co., Ld.

Wood Pulp—
Christiania, 1,160 pks. Wilson, Sons, & Co., Ld.
Drontheim, 360 bls. "
Hamburg, 132 "
" 200 pks.
Abo, " 40 J. Good & Sons

Zinc Oxide—
New York, 60 brls.
Rotterdam, 25 cks. W. & C. L. Ringrose

Zinc White—
Rotterdam, 10 cks. Hutchinson & Son

GLASGOW.

Week ending November 5th.

Acetic Acid—
Rotterdam, 7 cks.

Alizarine—
Rotterdam, 57 brls.
" 75 pks. J. Rankine & Son

Alumina—
Rotterdam, 10 cks. J. Rankine & Son

Aniline—
Rotterdam, 12 brls. 3 bxs. J. Rankine & Son

Arachide Oil—
Rotterdam, 7 cks. J. Rankine & Son

Asbestos—
Montreal, 200 bgs.
Genoa, 9 pks.

Barytes—
Rotterdam, 107 cks.

Blanc Fixe—
Antwerp, 1 ck.

Castor Oil—
Antwerp, 28 cks.
Marseilles, 116 brls. 25 cs.

Chemicals (*otherwise undescribed*)
Rotterdam, 1 cs. J. Rankine & Son

Colours—
Antwerp, 3 cks. 1 cs.
Rotterdam, 12 pks. qty. J. Rankine & Son
Hamburg, 1 ck.

Cottonseed Oil—
Baltimore, 50 brls.

Cream of Tartar—
Marseilles, 5 cks.

Glucose—
New York, 450 brls. Waddell & Bryson
" 50

Glue—
Boston, 6 brls.
Genoa, 22 bgs.
Hamburg, 170 3 cs.
Rotterdam, 10
" 40 J. Rankine & Son

Lactic Acid—
Hamburg, 10 brls. 12 kgs.

Lamp Black—
New York, 25 brls.

Limestone—
Ghent, 1 crate

Manganese Chloride—
Rotterdam, 6 cks. J. Rankine & Son

Molasses—
Montreal, 2 brls.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paraffin Wax—
Baltimore, 100 brls.
New York, 590

Pitch—
Archangel, 100 cks.

Plumbago—
Genoa, 300 bgs.

Potash—
Rotterdam, 50 cks. J. Rankine & Son
Hamburg, 20 68 dms.

Potassium Carbonate—
Hamburg, 10 cks.

Pyrites—
Huelva, 1,709 t. Tharsis Co.

Rosin—
Baltimore, 100 brls.

Salt—
Hamburg 50 bgs.

Saltpetre—
Hamburg, 13 cks. 30 kgs. 65 bgs.

Soap—
Newport News, 700 brls.
Marseilles, 31 cs.
Baltimore, 100
New York, 75 bxs.

Starch—
Rotterdam, 60 cs. J. Rankine & Son
Antwerp, 90

Sulphur Chlorite—
Rotterdam, 10 blns. 17 crbys. J. Rankine & Son

Tallow—
New York, 29 hds.

Tar—
Archangel 2,297 brls.

Tartar—
Oporto, 5 cks.

Tartaric Acid—
Rotterdam, 5 cks. J. Rankine & Son

Treacle—
Boston, 200 brls. Waddell & Bryson

Ultramarine—
Rotterdam, 6 cks. 10 cs J. Rankine & Son

Varnish—
Antwerp, 1 cs. 6 cks. 1 tin
New York, 8
Hamburg, 1

Wase Salt—
Hamburg, 142 ts.

White Lead—
Rotterdam, 20 cks.
" 80 J. Rankine & Son

Wood Pulp—
Oporto, 400 bls.
Christiania, 2,505

Zinc Oxide—
New York, 100 brls.

Zinc White—
Rotterdam, 200 cks. J. Rankine & Son

TYNE.

Week ending October 31st.

Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co

Barytes—
Antwerp, 40 bgs. Tyne S. S. Co.

Cod Oil—
Trondhjeim, 10 brls.
Bergen, 8 cks.

Colours—
Hamburg, 5 cs. Tyne S. S. Co.

Farina—
Hamburg, 20 bgs. Tyne S. S. Co.

Limestone—
Antwerp, 4 crts. Tyne S. S. Co.

Pyrites—
Huelva, 1,698 t. Scott Bros.

Quicksilver—
Copenhagen 103 cyldrs.

Starch—
Rotterdam, 40 cs. Tyne S. S. Co.

Waste Salt—
Harburg, 213 t. Cameron, Swan, & Co

White Lead—
Antwerp, 13 cks. Tyne S. S. Co.

Wood Pulp—
Gothenburg, 231 pks.
Laurvig, 60 bls

Zinc Oxide—
Antwerp, 10 brls. Tyne S. S. Co.

Zinc Sulphate—
Gothenburg, 155 bgs.

GOOLE.

Week ending October 28th.

Alizarine—
Rotterdam, 50 brls.

Alkali—
Calais, 15 cks.

Alum—
Rotterdam, 21 bgs.

Aniline—
Rotterdam, 336 brls. 82 cs.

Antimony—
Boulogne, 3 cks.

Barytes—
Rotterdam, 110 bgs.

Caoutchouc—
Boulogne, 11 cks.

Chemicals (*otherwise undescribed*)
Hamburg, 5 cs.

Dyestuffs (*otherwise undescribed*)
Boulogne, 94 cks. 8 cs.

Farina—
Harlingen, 100 bgs.
Delfszyhl, 1,230

Glucose—
Hamburg, 110 cks.
Calais, 100 bgs.

Logwood—
Yucatan, 450 t.

Potash—
Calais, 46 dms.

Saltpetre—
Hamburg, 68 cks.
Rotterdam, 100 bgs.

Soda—
Rotterdam, 5 cks.

Tartar—
Hamburg, 11 cks.
Rotterdam, 4

Waste Salt—
Hamburg, 879 cks. 700 bgs.

GRIMSBY.

Week ending October 31st.

Caoutchouc—
Antwerp, 12 cs.

Chemicals (*otherwise undescribed*)
Hamburg, 21 cks. 4 cs.
Antwerp, 50

Colours—
Antwerp, 14 cks. 91 pks.
Hamburg, 3 1 cs. 78
Rotterdam, 8

Dyes—
Hamburg, 4 cs.

Farina—
Hamburg, 80 bgs.

Glue—
Dieppe, 7 cks.

Lamp Black—
Malmo, 177 cks.

Pitch—
Hamburg, 80 cks.

Wood Pulp—
Skien, 664 t.
Fredrikshald, 375

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 4th.

Acetic Acid—
Algoa Bay, 12 cs. £23

Acids—
Fremantle, 20 cs. £13
Pt. Elizabeth, 3 t. 2 c. 40

Alum—
Rotterdam, 35 cks. £28

Ammonia—
Adelaide, 10 c. £19

Ammonia (Liquid)—
Boston, 4 c. £12

Ammonium Carbonate—
Adelaide, 5 c. £11
Rouen, 5 t. 10 140
St. Petersburg, 12 340

Ammonium Chloride—
Constantinople, 2 t. 10 c. £83
Cologne, 7 cks. 45
Gothenburg, 1 14 60

Ammonium Sulphate—
Antwerp, 105 t. £761
Malaga, 50 360
Bremen, 26 160
Rouen, 55 13 c. 390
Bordeaux, 20 55
Hamburg, 50 365

Anhydrous Ammonia—
Cologne, 27 cyldrs. £175

Barium Chlorate—
New York, 5 c. £22

Bisulphite of Lime—
Cette, 8 cks. £15

Boracic Acid—
Brussels, 1 t. £33

Borax—
Madras, 8 c. £10

Calcium—
Rockhampton, 16 t. 6 c. £48

Carbolic Acid—
Colombo, 6 cs. £10
Calcutta, 2 9

Carbon Bisulphide—
Hamburg, 31 dms. £110

Caustic Potash—
E. London, 10 dms. £14
Sydney, 5 c. 15

Caustic Soda—
Pt. Elizabeth, 13 c. £15
Algoa Bay, 3 t. 8 82
Wellington, 4 12
Natal, 1 8 28
Durban, 14
New York, 18

Chemicals (*otherwise undes.*)—
Konigsberg 3 t
Madras, 20 kgs.
Calcutta, 1 c.
Melbourne, 40 crts.
Rotterdam, 13 dms.
Sydney, 10 cs.
Tampico 4
Stettin, 10 cks.
Auckland, 23 pks.
Kingston,
Lisbon, 6
Mombasa, 1
New York, 23
Cape Town, 5
Natal, 2
Valparaiso, 1
Hamburg, 20 t.
Barcelona, 14 7

Citric Acid—
Natal, 2 c. 1 cs. £19
Oporto, 5 32
Shanghai, 1 6
Malta, 1 kg. 1 9
Newcastle, 1 7
Algoa Bay, 2 9
Dusseldorf, 1 ck. 38
Hamburg, 1 brl 41 4 388
Barcelona, 3 t. 6 c. 360
Moscow, 6 kgs. 37
Bombay, 2

Coal Products—
Alizarine Dyes
Dunedin, 2 cks. £33
Aniline Dyes
Brussels, 1 ck. £6
Aniline Oil
Boulogne, 12 dms. £550
Ghent, 13 700
Anthracene
Dusseldorf, 360 cks £1,993
Benzine
E. London, 1 cs. £5
Algoa Bay, 15 dms. 17
Creosote
New York, 525 cks. £268
Creosote Oil
Boston, 250 brls. £150
Naphtha
Antwerp, 13 cks. £50
Treport, 30 30 brls 203
Calais, 22 67
Naphthaline
Hamburg, 1,410 bgs. £330
Rotterdam, 200 110
Naphtholeum
Demerara, 3 cks. £10
Pitch
Boston, 300 brls. 100 cks. £188
Cette, 1,508 t. 2,262
Hochfeld, 445 897
New York, 400 288
Pt. Elizabeth, 10 brls. 6
St. Nazaire, 160 300
Sydney, 6 8
Aviles, 1,150 1,725
Pyridine
Hamburg, 6 dms. £210
Pyridine Bases
Rotterdam, 8 dms £307
Tar
Sydney, 100 dms. £18
Braila, 25 brls. 14
Natal, 250 33

Coal Products *(otherwise undes.)*—
Brussels, 1 dm. £9

Cream of Tartar—
Algoa Bay, 3 cs. £14
Singapore, 3 c. 13
Hiogo, 10 48
Dunedin, 19 48
Yokohama, 10 30 kgs 203
Sydney, 2 t. 5 194
Melbourne, 1 5 107
Madras, 3 cks. 16
Natal, 3 14
Auckland, 1 7 112

Disinfectants—
Algoa Bay, 2 kgs. £10
Natal, 3 cs. 10
Hamburg, 50 cks. 225
Sydney, 2 10

Manganese Chloride—
Saigon, 20 dms. 1 c. £65

Manure—
Durban, 20 t. £98
Jamaica, 30 187
St. Ann's Bay, 3 1 c. 14
Rotterdam, 16 9 100
Landerneau, 150 544
Penang, 222 1,776
Cape Town, 10 50
Trinidad, 4 12 133
Algoa Bay, 3 3 25
Bordeaux, 355

Nitric Acid—
Jersey, 20 carboys £40

Oxalic Acid—
Adelaide, 3 cks. £24

Phosphorus—
Wellington, 14 c. £169

Potash—
Melbourne, 1 t. 6 c. £55
Colombo, 2 cs. 10

Potash Crystals—
Auckland, 3 cks. £16

Potash Salts—
Auckland, 2 t. 8 c. £168
Delagoa Bay, 21 4 2,075

Potassium—
Calcutta, 4 c. £19

Potassium Chlorate—
Montreal, 10 c. £20
New York, 7 15
B. Ayres, 1 t. 47

Potassium Cyanide—
Natal, 40 c. £11
Townsville, 9 t. 7 974
Shanghai, 5 cs. 38
Algoa Bay, 11 1,129

Potassium Nitrate—
New York, 11 c. £15

Potassium Prussiate—
New York, 20 cks. £348
Barcelona, 7 108

Potassium Sulphate—
St. Kitts, 5 t. £54

Rochelle Salts—
New York, 1 t. £70

Saltpetre—
Lisbon, 1 t. 16 c £37
Sydney, 17 382
Bahia, 1 3 25
Natal, 15 15
Oporto, 3 14 74
Madeira, 8 13

Sheep Dip—
B. Ayres, 60 bgs. 15 cks. £120
Rockhampton, 25 dms. 31
Brisbane, 25 31
Normanton, 10 13
Townsville, 20 25
E. London, 232 pks. 66
Sydney, 50 100 cs. 183
Melbourne, 100 kgs. 150
Algoa Bay, 3 t. 63

Soap—
Cape Town, 2 c. £17

Soda Crystals—
Newcastle. 26 t. 16 c £58

Sodium Bicarbonate—
Auckland, 4 t. 1 c. £24

Sodium Peroxide—
Algoa Bay, 3 c. 18

Sodium Sulphate—
Gothenburg, 201 t. £300

Sodium Tartrate—
Montreal, 1 t. 14 c. £123
Oporto, 5 19

Strontium Nitrate—
New York, 8 t. 11 c. £128

Sulphur—
Algoa Bay, 50 kgs £22
Lisbon, 100 brls. 69
Pt. Elizabeth, 50 22
B. Ayres, 3 t. 6 c. 31

Sulphuric Acid—
Natal, 2 t. 5 c. £21
Tellicherry, 12 cs. 10
Algoa Bay, 35 36

Tartaric Acid—
Algoa Bay, 2 cs £12
Dunedin, 5 c. 34
Adelaide, 5 30
Boulogne, 5 5
Sydney, 2 16 332
Cape Town, 2 12

LIVERPOOL.

Week ending November 4th.

Alkali—
Boston 16 t. 17 c. £105

Alum—
Havana, 7 t. 1 c. 2 q. £20
Montreal, 8 15 1 46
Ibrail, 10 5 51
B. Ayres, 3 15
Oporto, 2 10
Talcahuano, 2 15 1 13
Patras, 1 9 1 7
Syra, 2 18 3 14
Boston, 3 5 17
San Francisco, 20 100
Cape Town, 2 16 14

Aluminium—
Gijon, 17 c.

Ammonia—
Rangoon, 3 c. £5

Ammonium Carbonate—
Leghorn, 10 c. £14
Copenhagen, 2 t. 56
Sydney, 3 2 87
Trieste, 15 26
Lisbon, 8 14
Adelaide, 10 19
Marseilles, 1 10 43
Hamburg, 10 15
Genoa, 1 10 43

Ammonium Chloride—
Ibrail 6 c. 3 q. £12
Hamburg, 15 93
Barcelona, 1 t. 15 39
Valencia, 2 18 1 110
Calcutta, 3 99
Amsterdam, 6 11
Genoa, 6 13
Montreal, 2 1 47
Syra, 15 26
Gothenburg, 1 14 38
Volo, 3 6
St. Petersburg, 10 6 952
Bombay, 3 99
Catania, 7 12
Tripoli, 4 6
Larnaca, 4 6

Ammonium Sulphate—
Bilbao 10 t. £80
Bordeaux, 20 4 c. 160
Sourabaya, 25 200
Demerara, 58 6 3 q. 415
Boston, 51 2 2 363
Barcelona, 66 19 1 537
Valencia, 72 14 539
Genoa, 45 19 1 362
Rio de Janeiro, 19 3 10

Antimony Salts—
Bombay, 7 c. £6

Bleaching Powder—
Ancona, 46 cks.
Baltimore, 63
Boston, 586
Calcutta. 122 cs.
Cape Town, 40 bxs.
Genoa, 158
Montreal, 19
Nantes, 72
Newport News, 39
New York, 196
Philadelphia, 85
Riga, 5 15 brls. 60 kgs.
Rio de Janeiro, 47
Rosario, 20
Rotterdam, 15
Rouen, 45
San Sebastian, 50

Boracic Acid—
Copenhagen, 1 t. 1 c. £25
Hamilton, 6 2 q. 10
Rotterdam, 1 2 33
Sydney, 1 5 39
Bremen, 5 13 120
Antwerp, 5 15 2 130
Hamburg, 5 11 3 145

Borax—
Copenhagen, 1 t. 2 c. 1 q. £27
Melbourne, 2 43
M. Video, 12 12
Berlin, 10 4 3 205
Stockholm, 5 6 106
Vera Cruz. 10 10
Montreal, 5 4 } 366
Hamilton, 12 13 1 }
" 2 1 3 44
Montreal 13 4 2 242
Gothenburg, 1 2 21
Sydney, 6 107
Hamburg, 2 8 2 52
Genoa, 3 10 63
Danzig, 11 10 2 240
Amsterdam, 4 78
Naples, 1 10 27
Venice, 1 10 27
Rotterdam, 42 5 2 997

Calcium Chloride—
Rangoon, 12 c. £6

Carbolic Acid—
New York, 8 t. 3 q. £365
Santander, 7 c. 3 27
Rotterdam, 10 602
Cadiz, 4 2 11
M. Video, 3 3 19
Hamburg, 5 16
Rosario, 2 4

Carbonic Acid Gas—
Samarang, 2 t. £22

Caustic Potash—
Wellington, N.Z., 5 c. £7
Baltimore, 3 t. 11 88

Caustic Soda—
Adelaide, 8 bxs. 4 pks.
Alexandria, 80 dms.
Amsterdam, 130
Ancona, 70
Bahia, 90
Baltimore, 50
Barcelona, 280 122 cks.
Bilbao, 80
Boston 50 brls.
Calcutta, 40
Callao, 100
Carril, 6
Carupana, 12
Constantinople, 51
Corinto, 14
Corunna, 11
Dunkirk, 35
Dunedin, 45
Fiume, 71
Galatz, 677
Genoa, 497
Hamburg, 45 5
Huelva, 25 6
La Guayra, 30
Libau, 209
Lisbon, 100
Madeira, 5
Malaga, 88 18
Manaos, 5 3
Marseilles, 25
Montreal, 875 167
Naples, 25
N. Orleans, 155
Newfairwater, 35
New York, 670 107
Pernambuco, 120
Philadelphia, 280
Quebec, 10
Rangoon, 10
Riga, 40
Rio de Janeiro, 31
Rosario, 13
Rotterdam, 92 pks.
St. Petersburg, 107
Samarang, 12
Santander, 30
Seville, 100
Singapore, 50 tins
Stettin, 87
Talcahuano, 30
Valparaiso, 60
Venice, 68
Vera Cruz, 20

Chemicals *(otherwise undescribed)*
Stettin, 4 t. 17 c. £153
Gothenburg, 8 14
Copenhagen, 12 21
Leghorn, 4 42
Melbourne, 5 9
Odessa, 16 16 301

China Clay—
Bombay, 160 cks.
Boston, 2,378
Calcutta, 66
Lisbon, 16
Maranham, 60 bgs.
Montreal, 473
Philadelphia, 200
Rio de Janeiro, 40

Chromium Trioxide—
Antwerp, 5 c, £18

Citric Acid—
St. Petersburg, 1 t. 5 c. £148
Montreal, 10 64
Vera Cruz, 2 12

Coal Products—
Alizarine
Boston, 12 cks.
New York, 5
Aniline Colours
Barcelona, 1 kg.
New York, 36 cks. 10 brls.
Aniline Oil
Genoa, 9 dms.
Philadelphia, 10
Aniline Salts
Genoa, 10 cks.
New York. 13
Philadelphia, 60 cs.
Smyrna, 19
Anthracene
Rotterdam, 29 cks.
Naphtha
Melbourne, 40 dms.
Naphthol
New York, 10 cks.
Pitch
Marseilles, 502 t. 10 c.
Rotterdam, 70 brls.
Tar
Batavia, 163 brls.
St. John's, N fld., 50 cks.
Salonica, 50
Samarang, 47
Sourabaya, 111
Accra, 10
Cabenda, 15
Demerara, 20
Galatz, 50

Copper Sulphate—
Gothenburg, 1 t. 5 c. £20
B. Ayres, 2 10 40
Marseilles, 4 18 2 q. 76
Rio de Janeiro, 19 10
Konigsberg, 1 4 27
Bari, 5 1 79
Montreal, 6
Oran, 1 19

Rouen, 10 170
Halifax, 10 10
Catania, 10 2 162
Havre, 5 7 3 86

Copperas—
Montreal, 10 t. £17
Talcahuano, 11 17 c. 24

Disinfectants—
Calcutta, 3 t. 7 c. 3 q. £39
B. Ayres, 1 5
Pernambuco, 5 18
Rosario, 1 cs. 1 13 56
Rangoon, 1 8 10

Guano—
Malaga, 10 t. £76

Lime—
Punta Arenas, 3 t. £6

Magnesia—
Paris, 60 cs.
Vera Cruz, 6

Magnesium Chloride—
Nantes, 5 t. 2 c. £13

Magnesium Sulphate—
Carania, 20 kgs.
Montreal, 50 brls.
Rio de Janeiro, 26

Manure—
Valencia, 9 t. 13 c. £75

Naphthol Colours—
New York, 18 cks.

Oxalic Acid—
Boston, 9 t. £256
Stettin, 5 10 c. 164
Rosario, 4 7
Newcastle, NSW., 2 3 67
B. Ayres, 9 3 q. 18

Paint—
Algoa Bay, 1 ck.
Arroyo, 1,
Axim, 15 kgs.
Belize, 12 195
Bombay, 121 cs. 1,043 30 dms.
30 brls.
B. Ayres, 7 51
Cadiz, 275
Calcutta, 4 10
Callao, 10
Cavite, 8
Colombo, 3
Corinto, 6
Corunna, 15
Demerara, 5 brls. 48
Genoa, 2 20
Havana, 3 25
Iquique, 8
Lagos, 60
La Libertad, 5 cs.
Manila, 8 100
Montreal, 50
New York, 12
Old Calabar, 4
Ponce, 2
San Jose de Guatemala, 1 cs
Shanghai, 80 dms.
Santiago de Cuba, 7 brls.
Sierra Leone, 58 pks.
Teneriffe, 10
Ukaka, 1
Vera Cruz, 3 cs. 65

Painters' Colours—
B. Ayres, 25 cks. 100 cs.
New York, 3 101 brls.
Para, 23 tcs. 18 46 kgs. 2
Pernambuco, 20 4 bxs.
Ponce, 3
Pt. Natal, 57 22 brls.
Rio de Janeiro, 1 cs.
St. John's, N'fl'd., 19 2 dms.
San Juan, 2
Sierra Leone, 100
Sourabaya, 100
Oporto, 92

Paraffin Wax—
Hamburg, 5 brls. 5 cs.
Marseilles, 100
Santander, 10 bgs.
Syra, 7

Phosphate—
Hamburg, 13 t. 6 c. 2 q. £60

Phosphorus—
Trinidad, 3 c. £30
Hong Kong, 1 3 q. 27
Hiogo, 1 t. 16 2 470
Shanghai, 18 180
Tampico, 5 53

Potash—
B. Ayres, 8 c. 2 q. £5

Potash Salts—
N. Orleans, 26 t. 18 c. £1,500
Vancouver, 2 10 1 q. 250
Corinto, 4 1 2 477

Potassium Bichromate—
Ghent, 4 t. 17 c. 1 q. £192

Potassium Carbonate—
Boston, 18 t. 4 c. £395

Potassium Chlorate—
Porto Alegre, 2 t. £75
Gothenburg, 12 10 c. 490
B. Ayres, 1 5 46
Hamburg, 10 17
Yokohama, 25 841
Hong Kong, 1 39
Bremen, 10 18
Rotterdam, 5 9
Rio de Janeiro, 6 230
Gutujewsky, 1 40
Riga, 10 353
St. Petersburg, 15 510
Calcutta, 8 15
New York, 5 193
Messina, 6 11
Philadelphia, 5 188
Hiogo, 95 886

Potassium Cyanide—
Corunna, 4 c. £20

Salt—
Accra, 15 t. 500 bgs.
Antwerp, 85
Baltimore, 365
Belize, 150
Boston, 500
B. Ayres, 17 17 c.
Calcutta, 2,344
Cameroons, 16 15
Conakry, 46
Copenhagen, 69
Egwanga, 20 1
Galveston, 1,001 10
Ghent, 50
Halifax, 100
Hamburg, 350
Lagos, 199 26
Landana, 10
Maranham, 17 17
Matadi, 45
M. Video, 15
Montreal, 1,092 10
Newcastle, 75
New York, 298
N'Kombi, 10 19
Nykjobing, 140
Old Calabar, 60 4
Para, 72
Rio Pongo, 49 2
Rotterdam, 250
St. John, N.B., 300
Sapeli, 13 7
Santos, 200 cs.
Sydney, 49 13
Valparaiso, 13 4
Victoria, W.A., 250 bgs.
,, B.C., 12
Opobo, 20 1

Salt Cake—
Antwerp, 81 t. 3 c. £106
Baltimore, 45 6 80

Saltpetre—
Rosario, 11 c. £14
Corinth, 1 t. 8 31
Maranham, 1 2 3 q. 26
Para, 2 3
Parnahyba, 10 12

Sheep Dip—
New York, 5 c. £8
Wellington, N.Z., 6 t. 5 125
Montreal, 2 5 45
Pt. Elizabeth, 6 14 75
B. Ayres, 128 19 3 q. 7,921
Belize, 5 9

Soap—
Alexandria, 1 cs.
Amsterdam, 5
Antwerp, 1,390
Baltimore, 30 bxs
Bathurst, 80
Bombay, 500
B. Ayres, 48
Calcutta, 20
C. C. Castle, 2
Cape Town, 75
Cartagena, S.A., 10
Cette, 161
Coquimbo, 5
Copenhagen, 40 32
Genoa, 180
Gibraltar, 165 68
Gd. Canary, 40
Havre, 477
Jersey, 90
Karachi, 500 64
Kingston, 1,650
Landana, 2
Malta, 165 100
Manaos, 1,170
Matadi, 733
Mellia, 100
Montreal, 800
Newcastle, 5
New York, 8 1 ck. 34
Noqui, 20
Para, 600
Penang, 5
Piræus, 46
Pt. Elizabeth, 12 bdls.
Pt. Natal, 100
Rangoon, 500
Rotterdam, 400
St. John's, N'fd., 40
St. Nazaire, 50
Salonica, 25
San Juan, 190
Sapeli, 20
Sierra Leone, 167
Singapore, 599
Smyrna, 67
Sydney, 3,500
Teneriffe, 50
Victoria, W.A., 40
Warri, 1,600

Soda Alkali—
Alicante, 35 brls.
Adelaide, 20
Barcelona, 35
Corunna, 19
Galatz, 17
Leghorn, 165
Montreal, 30
Quebec, 20
Smyrna, 40

Soda Ash—
Antwerp, 502 bgs.
Baltimore, 37 cks. 1,040
Barcelona, 66
Boston, 240 200
B. Ayres, 185 125 brls.
Cadiz, 150
Calcutta, 100 kgs.
Callao, 9
Copenhagen, 300
Corfu, 50 brls.
E. London, 40 kgs.
Genoa, 700
Ghent, 10
Hamburg, 25 950
Maranham, 70 brls.
M. Video, 100
Montreal, 15 200
New York, 126 tcs. 900
Piræus, 50
Rio de Janeiro, 10 cks.
Rotterdam, 100
Samarang, 73
Smyrna, 200
Stockholm, 6
Trieste, 200
Venice, 500
Vera Cruz, 28
Yokohama, 25 dms.

Soda Crystals—
Barcelona, 10 cks.
Boston, 140 brls.
B. Ayres, 100 200 kgs.
Calcutta, 33
Cape Town, 20
Galatz, 34
Halifax, 77
Jersey, 30
Kingston, 2
Malta, 50
Montreal, 200 468 690
Alexandria, 50
Quebec, 10
St. John's, N'fd., 60
Toronto, 325
Valparaiso, 35

Sodium Bicarbonate—
Alicante, 150 kgs.
Amsterdam, 1 ck. 15
Ancona, 25
B. Ayres, 180 220
Calcutta, 500
Callao, 5
Cape Town, 100
Copenhagen, 4
E. London, 40
Galatz, 10
Genoa, 110
Ghent, 20
Galujcasky, 500
Halifax, 250
Hamburg, 83
Iquique, 20 bgs.
Leghorn, 4 270
Madras, 50
Marseilles, 20
Montreal, 15 202
Nantes, 9 50
N. Orleans, 80
Odessa, 350
Pt. Natal, 20
Rosario, 2 cs.
Rotterdam, 20
St. Petersburg, 100 dms.
Toronto, 250
Valencia, 120
Valparaiso, 300
Victoria, B. C., 50

Sodium Carbonate—
Boston, 56 brls.
New York, 56

Sodium Chlorate—
Rotterdam, 20
Rouen, 10
Stettin, 144 bgs.

Sodium Hyposulphite—
Portland, O., 100
Rotterdam, 15 brls.
Sydney, 50

Sodium Phosphate—
Vera Cruz, 3 cks.

Sodium Prussiate—
New York, 20 cks.

Sodium Silicate—
Constantinople, 25 cks.
Montreal, 25
New York, 15
Philadelphia, 5
Salonica, 20

Sodium Sulphate—
Hamburg, 13 brls.
Rio de Janeiro, 25 cks.

Stannate Soda—
Vera Cruz, 1 ck.

Starch—
Boston, 25 cks.

Strontia—
Rotterdam, 2 t. 4 c.
Hamburg, 2

Sulphur—
Boston, 130 t. 6 c.
Montreal, 59 17
Colombo, 2 2
Punta Arenas, 5
Kurrachee, 2 2

Sulphuric Acid—
Maranham, 18 c.
Valparaiso, 2 t. 2

Superphosphates—
Barcelona, 74 t.

Tin Crystals—
Trinidad, 3 t. 2 c. 2 q.

Varnish—
Cadiz, 16 cs.
C. C. Castle, 2
Gijon, 4 cks.
Lagos, 2
Maranham, 2 dr
Matadi, 22
Pacasmayo, 2
Pt. Said, 2
Pt. Natal, 2

White Lead—
Vera Cruz, 80 kgs.

Zinc Chloride—
B. Ayres, 36

Zinc Oxide—
Pernambuco, 30 c. 3 q.

MANCHESTE

Week ending November 4th

Albumen—
Rotterdam, 3 cks.

Alum—
Caiffa, 13 cks.

Ammonium Carbonate—
Copenhagen, 10 cks.
Rotterdam, 9 kgs.

Ammonium Sulphate—
Valencia, 1,492 kgs.

Aniline Colours—
Barcelona, 1 kg. 3 cs.
Hamburg, 8 2

Aniline Oil—
Barcelona, 10 cks.
Hamburg, 8 dms.
Rotterdam, 10

Aniline Salts—
Barcelona, 35 cks.

Caustic Soda—
Treport, 30 dms.

Chemicals (*otherwise unde*
Antwerp, 12 kgs.

Copperas—
Tripoli, 25 brls.

Cottonseed Oil—
Tunis, 60 brls.

Creosote Salts—
Barcelona, 16 cks.
Glue—
Antwerp, 6 cks.
Barcelona, 38
Rotterdam, 10
Tar Oil—
Hamburg, 1 ck.
Toluol—
Rotterdam, 27 dms.

HULL.

Week ending October 31st.

Ammonium Sulphate—
Bordeaux, 150 bgs.
Benzol—
Amsterdam, 5 cks.
Rotterdam. 24
Bleaching Powder—
Stettin, 39 cks.
Trieste, 25
Caustic Soda—
Abo, 3 cks.
Genoa, 70 dms
Chemicals *(otherwise undescribed)*
Abo, 9 cks.
Antwerp, 26 cs.
Bremen, 2 11 pks
Constantinople, 400
Christiania, 24 5
3,047 slbs.
Copenhagen, 8
Gothenburg, 5
Genoa, 5 25
Hamburg, 10 60
Konigsberg, 3 3 20
Leghorn, 10
Naples, 30
New York, 70 10
Odessa, 21
Riga, 3
Rotterdam, 4 35 16
St. Petersburg, 20 30
Stettin, 4 bdls. 1
Stockholm, 12
Trieste, 16
Cottonseed Oil—
Amsterdam, 571 c.
Antwerp, 867
Bremen, 51
Copenhagen, 200
Fiume, 84
Hamburg, 1,020
Konigsberg, 300
Leghorn, 100
Marseilles, 5,580
Rotterdam, 500
Stettin, 137
Dyestuffs *(otherwise undes.)—*
Abo, 3 cks.
Amsterdam, 100
Constantinople, 4 cs.
Christiania, 23 bgs.
New York, 5 dms.
Rotterdam, 24
Linseed Oil—
Amsterdam, 59 c.
Antwerp, 114
Bergen, 44
Christiansand, 14
Christiania, 374
Copenhagen, 99
Drontheim, 25
Fiume, 1 ck.
Hamburg, 812 c.
Rotterdam, 61
Stavanger, 52
Stockholm, 40
Manure—
Abo, 98 t.
Harburg, 500
Marseilles, 10
Mineral White—
Bergen, 50 bls.
Ochre—
Hamburg, 1 ck.
Rotterdam, 4
Painters' Colours—
Abo, 10 pks.
Amsterdam, 1 cs.
Antwerp, 267 cks. 3 3 dms.
Bordeaux, 2
Boston, 9
Christiania, 2 2
Copenhagen, 1 1
Gothenburg. 1 20
Ghent, 3
Genoa, 7 102 pks.
Hamburg, 2 5
Leghorn, 12
Naples, 4
Palermo, 10
Rouen, 1
Rotterdam, 5 4 10 dms.
St. Petersburg, 50
Stettin, 23
Stockholm, 1 1 4 pks.
Trieste, 4
Pitch—
Antwerp, 70 t.
New York, 17 bgs.
Soap—
Amsterdam, 2 cs.
Bergen, 5
Drontheim, 50
Tallow—
Amsterdam 21 cks
Gothenburg, 10
Stockholm. 15
Tar—
Antwerp, 6 cks.
Dunkirk, 131
Rotterdam, 1
Tar Oil—
Fiume, 1 dm.
Varnish—
Gothenburg, 2 cks. 3 cs. 4 dms.
Stettin, 8 1
Waste Salt—
Stettin, 100 bgs.

GLASGOW.

Week ending November 5th.

Ammonium Sulphate—
Gandia, 50 t. 17 c.
Baltimore, 50 18
Cullera, 76 2½
U.S.A., 51 12¾
Valencia, 76 5½
Barbadoes, 51 3¾
Demerara, 158 7¾
Trinidad, 31 10
Antwerp, 110 3
Mauritius, 101 3
Nantes, 5 2½
Bleaching Powder—
Calcutta, 94 t. 19 c.
Caustic Soda—
Calcutta, 26 t. 11 c.
China Clay—
Rio de Janeiro, 3 t. 5 c.
Coal Products—
Aniline Dyes
Calcutta, £36
Serampore, 35
Creosote Oil
Danzig, £54
Pitch
Madras, £6. 15s.
Christiania, £18
Danzig, 78 t
Antwerp, 453
Hamburg, 10 4 c.
B. Ayres, 75
Canada, 371
U.S.A., 160
Dieppe, 550 11
Tar
Calcutta, £100
Colombo, £12. 9s.
U.S.A., £102
Christiania, 25
Danzig, 1,067 brls.
Canada, 53
Bombay, 20
B. Ayres, 75
Madras. 36
Tar Acids
U.S.A., £13
Tar Oil
Rotterdam, 5 t. 10 c.
Hamburg, 2 11
Coal Products *(otherwise undes.)—*
Rotterdam, £245
Extracts—
Christiania, £22
Gelatine—
U.S.A., £1,043
Hydrochloric Acid—
Trinidad, £22
Iron Sulphate—
Bombay, £62
Lead Acetate—
Bombay, £57
Logwood—
Gothenburg, £127
Magnesium Sulphate—
Melbourne, £39
Montreal, 61
Manganese Oxide—
New York, 10 t. 1 c.
Manure—
Demerara, 28 t.
Falmouth, 8 17 c.
Paint—
Bangkok, £43
Calcutta, 369
Colombo, 48
Hiogo, £18. 10s.
Iquique, £55
Painters' Colours—
Adelaide, £132
Brisbane, 120
Calcutta, 131
Colombo, 83
Amsterdam, 34
Christiania, 56
Trinidad, 33
Bombay, 46
Paraffin Wax—
Danzig, 10 t.
Egypt, £25
Bordeaux, 47
Potassium Bichromate—
Rotterdam, £387
Bombay, 162
Salt—
Calcutta, 5 t. 3½ c.
Salt Cake—
Terneuzen, 301 t. 1¾ c.
Soap—
Calcutta, 2 t. 7 c.
Barbadoes, 2 5
B. Ayres, 5
Sodium Bichromate—
Bombay, 1 t. ½ c.
Nantes, 5 ¾
Starch—
Rotterdam, 2 t. 11½ c.
Treacle—
Algoa Bay, 2 t. 10 c.
Christiania, 18 2
Gothenburg, 33 6¾
Aalesund, 62 5
White Lead—
Calcutta, £93
Zinc White—
Calcutta, £86

TYNE.

Week ending October 31st.

Alkali—
Savona, 30 t. 13 c.
Copenhagen, 40
Rotterdam, 1 3
Bergen, 5 7
Venice, 8 12
Amsterdam, 18 2
Antimony—
Hamburg, 15 t.
Rotterdam, 16
Arsenic—
Antwerp, 3 c.
Copenhagen, 11
Asbestos—
Bergen, 1 truss
Barium—
Rouen, 20 t. 10 c.
Hamburg, 2 3
Venice, 7 12
Barium Carbonate—
Hamburg, 153 t. 6 c
Rouen, 98
Bleaching Powder—
Christiania, 27 t. 10 c.
Antwerp, 31 13
Hamburg, 55 5
Gefle, 50 4
Odense, 10 1
Copenhagen, 7 11
Rotterdam, 15 6
Bergen, 10 1
Ghent, 25 1
Venice, 5 16
Amsterdam, 27 11
Carbolic Acid—
Rotterdam, 5 t. 14 c.
Caustic Soda—
Antwerp, 4 t. 18 c.
Hamburg, 27 17
Stockholm, 60 5
Skutari, 5 16
Copenhagen, 8 8
Bergen, 11
Montreal, 49 17
Venice, 41 8
Amsterdam, 1 16
China Clay—
Copenhagen, 15 t. 18 c.
Linseed Oil—
Montreal, 4 t. 17 c.
Litharge—
Hamburg, 8 t. 16 c.
Stockholm, 1 2
Montreal, 12 14
Magnesia—
Antwerp, 2 c.
Hamburg, 1 t. 15
Stockholm, 1
Manure—
Valencia, 170 t.
Paint—
Antwerp 1 t. 5 c.
Copenhagen, 5
Rotterdam, 10
Phosphorus—
Valencia, 4 t. 8 c.
Potassium Bichromate—
Venice, 8 c.
Soda—
Antwerp, 10 t. 2 c.
Savona, 10 11
Stockholm, 35 9
Gefle, 25 3
Svendborg, 5
Smyrna, 10 15
Aarhuus, 5 7
Venice, 51 5
Amsterdam, 32 11
Christiania, 14 14
Soda Ash—
Hamburg, 6 t. 17 c.
Stockholm, 100 12
Skutari, 27 7
Venice, 15 5
Sodium Nitrate—
Venice, 10 t.
Sodium Silicate—
Skutari, 6 t.
Venice, 5 6
Sodium Sulphate—
Antwerp, 10 t. 2 c.
Copenhagen, 11
Venice, 3 8
Sulphur—
Christiania, 300 t. 8 c.
Stockholm, 15
Varnish—
Christiania, 1 c.
White Lead—
Hamburg, 6 c.
Smyrna, 5 t. 2
Montreal 10 2

GOOLE.

Week ending October 28th.

Benzol—
Amsterdam, 50 cks.
Rotterdam, 122
Chemicals *(otherwise undescribed)*
Ghent, 10 pks.
Coal Products *(otherwise undes.)—*
Amsterdam, 50 cks. 16 pks.
Antwerp, 125
Boulogne, 35 2 cs.
Rotterdam, 110 1
Colours—
Amsterdam, 1 ck.
Boulogne, 4 6 cs. 1 pk.
Harlingen, 2
Rotterdam, 5
Dyestuffs *(otherwise undescribed)*
Ghent, 3 cks.
Hamburg, 42
Rotterdam, 2 cs
Pitch—
Antwerp, 351 t.

GRIMSBY.

Week ending October 31st.

Chemicals *(otherwise undescribed)*
Dieppe, 4 cks.
Rotterdam, 29 dms.
Coal Products *(otherwise undes.)—*
Dieppe, 134 cks.
Hamburg, 2 cs. 29 pks.
Rotterdam, 1
Colours—
Antwerp, 1 ck. 4 cs.
Dieppe, 3
Hamburg, 73 15
Dyestuffs *(otherwise undes.)—*
Dieppe, 5 cks.

Rouen, 10 170
Halifax, 10 10
Catania, 10 2 162
Havre, 5 7 3 86

Copperas—
Montreal, 10 t. £17
Talcahuano, 11 17 c. 24

Disinfectants—
Calcutta, 3 t. 7 c. 3 q. £39
B. Ayres, 1 5
Pernambuco, 5 18
Rosario, 1 cs. 1 13 56
Rangoon, 1 8 10

Guano—
Malaga, 10 t. £76

Lime—
Punta Arenas, 3 t. £6

Magnesia—
Paris, 60 cs.
Vera Cruz, 6

Magnesium Chloride—
Nantes, 5 t. 2 c. £13

Magnesium Sulphate—
Catania, 20 kgs.
Montreal, 50 brls.
Rio de Janeiro, 26

Manure—
Valencia, 3 t. 13 c. £75

Naphthol Colours—
New York, 18 cks.

Oxalic Acid—
Boston, 9 t. £256
Stettin, 5 10 c. 164
Rosario, 4 7
Newcastle, NSW., 2 3 67
B. Ayres, 9 3 q. 18

Paint—
Algoa Bay, 1 ck.
Arroyo, 1,
Axim, 15 kgs.
Belize, 12 195
Bombay, 121 cs. 1,043 30 dms
30 brls.
B. Ayres, 7 51
Cadiz, 273
Calcutta, 4 10
Callao, 10
Cavite, 8
Colombo, 3
Corinto, 6
Corunna, 25
Demerara, 5 brls. 48
Genoa, 2 20
Havana, 3 25
Iquique, 60
Lagos,
La Libertad, 5 cs.
Manila, 8 100
Montreal, 50
New York, 12
Old Calabar, 4
Ponce, 2
San Jose de Guatemala, 1 cs
Shanghai, 80 dms.
Santiago de Cuba, 7 brls.
Sierra Leone, 58 pks.
Teneriffe, 10
Ukaka, 1
Vera Cruz, 3 cs. 65

Painters' Colours—
B. Ayres, 25 cks. 100 cs.
New York, 3 101 brls.
Para, 23 tcs. 18 46 kgs. 2
Pernambuco, 20 4 bxs.
Ponce, 3
Pt. Natal, 57 22 brls.
Rio de Janeiro, 1 cs.
St. John's, N'fl'd., 19 2 dms.
San Juan, 2
Sierra Leone, 100
Sourabaya, 100
Oporto, 22

Paraffin Wax—
Hamburg, 5 brls. 5 cs.
Marseilles, 100
Santander, 10 bgs.
Syra, 7

Phosphate—
Hamburg, 13 t. 6 c. 2 q. £60

Phosphorus—
Trinidad, 3 c. £30
Hong Kong, 1 3 q. 27
Hiogo, 1 t. 16 2 470
Shanghai, 18 180
Tampico, 5 53

Potash—
B. Ayres, 8 c. 2 q. £5

Potash Salts—
N. Orleans, 96 t. 18 c. £2,500
Vancouver, 2 10 1 q. 250
Coriato, 4 1 2 477

Potassium Bichromate—
Ghent, 4 t. 17 c. 1 q. £192

Potassium Carbonate—
Boston, 18 t. 4 c. £325

Potassium Chlorate—
Porto Alegre, 2 t. £75
Gothenburg, 12 10 c. 490
B Ayres, 1 5 46
Hamburg, 10 17
Yokohama, 25 841
Hong Kong, 1 39
Bremen, 10 18
Rotterdam, 5 9
Rio de Janeiro, 6 230
Gutujewsky, 1 40
Riga, 10 353
St. Petersburg, 15 510
Calcutta, 8 15
New York, 5 193
Messina, 6 11
Philadelphia, 5 188
Hiogo, 25 886

Potassium Cyanide—
Corunna, 4 c. £20

Salt—
Accra, 15 t. 500 bgs.
Antwerp, 85
Baltimore, 365
Belize, 150
Boston, 500
B. Ayres, 27 17 c.
Calcutta, 2,344
Cameroons, 16 15
Conakry, 46
Copenhagen, 69
Egwanga, 20 1
Galveston, 1,021 10
Ghent, 50
Halifax, 100
Hamburg, 350
Lagos, 199 16
Landana, 10
Maranham, 17 17
Matadi, 45
M. Video, 15
Montreal, 1,092 10
Newcastle, 75
New York, 298
N'Kombi, 10 19
Nykjobing, 140
Old Calabar, 60 4
Para, 72
Rio Pongo, 49 2
Rotterdam, 250
St. John, N.B., 300
Sapeli, 13 7
Santos, 200 cs.
Sydney, 49 18
Valparaiso, 13 4
Victoria, W.A., 250 bgs.
" B.C., 12
Opobo, 20 1

Salt Cake—
Antwerp, 81 t. 3 c. £106
Baltimore, 45 0 80

Saltpetre—
Rosario, 11 c. £14
Corinth, 1 t. 8 31
Maranham, 1 2 3 q. 96
Para, 2 3
Parnahyba, 10 12

Sheep Dip—
New York, 5 c. £8
Wellington, N.Z., 6 t. 5 125
Montreal, 2 5 45
Pt. Elizabeth, 6 14 75
B. Ayres, 128 19 3 q. 1,921
Belize, 5 9

Soap—
Alexandria, 1 cs.
Amsterdam, 5
Antwerp, 1,390
Baltimore, 30 bxs
Bathurst, 80
Bombay, 500
B. Ayres, 48
Calcutta, 20
C. C. Castle, 2
Cape Town, 75
Cartagena, S.A., 10
Cette, 161
Coquimbo, 5
Copenhagen, 40 32
Genoa, 180
Gibraltar, 165 68
Gd. Canary, 40
Havre, 477
Jersey, 20
Karachi, 500 64
Kingston, 1,650
Landana, 2
Malta, 165 100
Manaos, 1,170
Matadi, 733
Mellia, 100
Montreal, 800
Newcastle, 5
New York, 8 1 ck. 34
Noqui, 20
Para, 600
Penang, 5
Piræus, 46
Pt. Elizabeth, 12 bdls.
Pt. Natal, 100
Rangoon, 500
Rotterdam, 400
St. John's, N'fd., 40
St. Nazaire, 50
Salonica, 25
San Juan, 190
Sapeli, 20
Sierra Leone, 167
Singapore, 599
Smyrna, 67
Sydney, 3,500
Teneriffe, 50
Victoria, W.A., 40
Warri, 1,600

Soda Alkali—
Alicante, 35 brls.
Adelaide, 20
Barcelona, 35
Corunna, 10
Galatz, 17
Leghorn, 165
Montreal, 30
Quebec, 20
Smyrna, 40

Soda Ash—
Antwerp, 502 bgs.
Baltimore, 37 cks. 1,040
Barcelona, 66
Boston, 240 200
B. Ayres, 185 125 brls.
Cadiz, 150
Calcutta, 100 kgs.
Callao, 9
Copenhagen, 300
Corfu, 50 brls.
E. London, 40 kgs.
Genoa, 700
Ghent, 10
Hamburg, 25 250
Maranham, 70 brls.
M. Video, 100
Montreal, 15 200
New York, 126 tcs. 900
Piræus, 50
Rio de Janeiro, 10 cks.
Rotterdam, 100
Samarang, 13
Smyrna, 200
Stockholm, 6
Trieste, 200
Venice, 500
Vera Cruz, 28
Yokohama, 25 dms.

Soda Crystals—
Barcelona, 10 cks.
Boston, 140 brls.
B. Ayres, 100 200 kgs.
Calcutta, 33
Cape Town, 20
Galatz, 34
Halifax, 77
Jersey, 50
Kingston, 2
Malta, 50
Montreal, 200 468 690
Alexandria, 50
Quebec, 10
St. John's, N'fd., 60
Toronto, 325
Valparaiso, 35

Sodium Bicarbonate—
Alicante, 150 kgs.
Amsterdam, 1 ck. 15
Ancona, 25
B. Ayres, 180 220
Calcutta, 500
Callao, 5
Cape Town, 100
Copenhagen, 4
E. London, 40
Galatz, 10
Genoa, 110
Ghent, 20
Galujcasky, 500
Halifax, 250
Hamburg, 25
Iquique, 20 bgs.
Leghorn, 4 270
Madras, 50
Marseilles, 20
Montreal, 15 102
Nantes, 8 50
N. Orleans, 20
Odessa, 350
Pt. Natal, 90
Rosario, 2 cs.
Rotterdam, 70
St. Petersburg, 100 dms.
Toronto, 250
Valencia, 100
Valparaiso, 200
Victoria, B. C., 50

Sodium Carbonate—
Boston, 56 brls.
New York, 56

Sodium Chlorate—
Rotterdam, 20
Rouen, 10
Stettin, 144 bgs.

Sodium Hyposulphite—
Portland, O., 110
Rotterdam, 13 brls.
Sydney, 50

Sodium Phosphate—
Vera Cruz, 3 cks.

Sodium Prussiate—
New York, 20 cks.

Sodium Silicate—
Constantinople, 15 cks.
Montreal, 25
New York, 25
Philadelphia, 5
Salonica, 26

Sodium Sulphate—
Hamburg, 23 brls.
Rio de Janeiro, 25 cks.

Stannate Soda—
Vera Cruz, 1 ck.

Starch—
Boston, 15 cks.

Strontia—
Rotterdam, 2 t. 4 c.
Hamburg, 1

Sulphur—
Boston, 180 t. 6 c.
Montreal, 59 17
Colombo, 1 1
Punta Arenas, 5
Kurrachee, 2 2

Sulphuric Acid—
Maranham, 18 c.
Valparaiso, 1 t. 1

Superphosphates—
Barcelona, 74 t.

Tin Crystals—
Trinidad, 3 t. 1 c. 2 q.

Varnish—
Cadiz, 16 cs.
C. C. Castle, 2
Gijon, 4 cks.
Lagos, 2
Maranham, 1 dr
Matadi, 80
Pacasmayo, 2
Pt. Said, 1
Pt. Natal, 1

White Lead—
Vera Cruz, 80 kgs.

Zinc Chloride—
B. Ayres, 30

Zinc Oxide—
Pernambuco, 90 3 q.

MANCHESTER

Week ending November 5th

Albumen—
Rotterdam, 3 cks.

Alum—
Caiffa, 13 cks.

Ammonium Carbonate—
Copenhagen, 10 cks.
Rotterdam, 9 kgs.

Ammonium Sulphate—
Valencia, 1,492 bgs.

Aniline Colours—
Barcelona, 1 kg. 8 cs.
Hamburg, 8 2

Aniline Oil—
Barcelona, 10 cks.
Hamburg, 8 dms.
Rotterdam, 10

Aniline Salts—
Barcelona, 35 cks.

Caustic Soda—
Treport, 30 dms.

Chemicals *(otherwise under)*
Antwerp, 12 kgs.

Copperas—
Tripoli, 25 brls.

Cottonseed Oil—
Tunis, 60 brls.

Creosote Salts—
Barcelona, 16 cks.
Glue—
Antwerp, 6 cks.
Barcelona, 38
Rotterdam, 10
Tar Oil—
Hamburg, 1 ck.
Toluol—
Rotterdam, 27 dms.

HULL.

Week ending October 31st.

Ammonium Sulphate—
Bordeaux, 150 bgs.
Benzol—
Amsterdam, 5 cks.
Rotterdam. 24
Bleaching Powder—
Stettin, 39 cks.
Trieste, 25
Caustic Soda—
Abo, 3 cks.
Genoa, 70 dms
Chemicals *(otherwise undescribed)*
Abo, 9 cks.
Antwerp, 26 cs.
Bremen, 2 11 pks
Constantinople, 400
Christiania, 24 5
3,047 slbs.
Copenhagen, 8
Gothenburg, 5
Genoa, 5 25
Hamburg, 10 60
Konigsberg, 3 3 20
Leghorn, 10
Naples, 30
New York, 70 10
Odessa, 21
Riga, 3
Rotterdam, 4 35 16
St. Petersburg, 20 30
Stettin, 4 bdls. 1
Stockholm, 12
Trieste, 16
Cottonseed Oil—
Amsterdam, 571 c.
Antwerp, 867
Bremen, 51
Copenhagen, 200
Fiume, 84
Hamburg, 1,020
Konigsberg, 300
Leghorn, 100
Marseilles, 5,580
Rotterdam, 500
Stettin, 137
Dyestuffs *(otherwise undes.)—*
Abo, 3 cks.
Amsterdam, 100
Constantinople, 4 cs.
Christiania, 25 bgs.
New York, 5 dms.
Rotterdam, 24
Linseed Oil—
Amsterdam, 59 c.
Antwerp, 114
Bergen, 44
Christiansand, 14
Christiania, 374
Copenhagen, 99
Drontheim, 25
Fiume, 1 ck.
Hamburg, 812 c.
Rotterdam, 61
Stavanger, 52
Stockholm, 40
Manure—
Abo, 98 t.
Harburg, 500
Marseilles, 10
Mineral White—
Bergen, 50 bls.
Ochre—
Hamburg, 1 ck.
Rotterdam, 4
Painters' Colours—
Abo, 10 pks.
Amsterdam, 1 cs.
Antwerp, 267 cks. 3 3 dms.
Bordeaux, 2
Boston, 9
Christiania, 2 2
Copenhagen, 1 1
Gothenburg. 1 20
Ghent, 3
Genoa, 7 100 pks.
Hamburg, 2 5
Leghorn, 12
Naples, 4
Palermo, 10
Rouen, 1
Rotterdam, 5 4 10 dms.
St. Petersburg, 50
Stettin, 23
Stockholm, 1 1 4 pks.
Trieste, 4
Pitch—
Antwerp, 70 t.
New York, 17 bgs.
Soap—
Amsterdam, 2 cs.
Bergen, 5
Drontheim, 50
Tallow—
Amsterdam 21 cks
Gothenburg, 10
Stockholm, 15
Tar—
Antwerp, 6 cks.
Dunkirk, 131
Rotterdam, 1
Tar Oil—
Fiume, 1 dm.
Varnish—
Gothenburg, 2 cks. 3 cs. 4 dms.
Stettin, 8 1
Waste Salt—
Stettin, 100 bgs.

GLASGOW.

Week ending November 5th.

Ammonium Sulphate—
Gandia, 50 t. 17 c.
Baltimore, 50 18
Cullera, 76 2½
U.S.A., 51 12¼
Valencia, 76 5½
Barbadoes, 51 3¾
Demerara, 158 7¾
Trinidad, 31 10
Antwerp, 110 3
Mauritius, 101 3
Nantes, 5 2½
Bleaching Powder—
Calcutta, 94 t. 19 c.
Caustic Soda—
Calcutta, 26 t. 11 c.
China Clay—
Rio de Janeiro, 3 t. 5 c.
Coal Products—
Aniline Dyes
Calcutta, £36
Serampore, 35
Creosote Oil
Danzig, £54
Pitch
Madras, £6. 15s.
Christiania, £18
Danzig, 78 t.
Antwerp, 453
Hamburg, 10 4 c.
B. Ayres, 75
Canada, 371
U.S.A., 160
Dieppe, 550 11
Tar
Calcutta, £100
Colombo, £11. 9s.
U.S.A., £102
Christiania, 25
Danzig, 1,067 brls.
Canada, 53
Bombay, 20
B. Ayres, 75
Madras, 36
Tar Acids
U.S.A., £33
Tar Oil
Rotterdam, 5 t. 10 c.
Hamburg, 2 11
Coal Products *(otherwise undes.)—*
Rotterdam, £945
Extracts—
Christiania, £22
Gelatine—
U.S.A., £1,043
Hydrochloric Acid—
Trinidad, £22
Iron Sulphate—
Bombay, £62
Lead Acetate—
Bombay, £57
Logwood—
Gothenburg, £127
Magnesium Sulphate—
Melbourne, £39
Montreal, 61
Manganese Oxide—
New York, 10 t. 1 c.
Manure—
Demerara, 28 t.
Falmouth, 8 17 c.
Paint—
Bangkok, £43
Calcutta. 369
Colombo, 48
Hiogo, £18. 10s.
Iquique, £55
Painters' Colours—
Adelaide, £132
Brisbane, 120
Calcutta, 131
Colombo, 83
Amsterdam, 24
Christiania, 56
Trinidad, 33
Bombay, 46
Paraffin Wax—
Danzig, 10 t.
Egypt, £25
Bordeaux, 47
Potassium Bichromate—
Rotterdam, £387
Bombay, 162
Salt—
Calcutta, 5 t. 3½ c.
Salt Cake—
Terneuzen, 301 t. 1¾ c.
Soap—
Calcutta, 2 t. 7 c.
Barbadoes, 2 5
B. Ayres, 5
Sodium Bichromate—
Bombay, 1 t. ½ c.
Nantes, 5 ¾
Starch—
Rotterdam, 2 t. 11½ c.
Treacle—
Algoa Bay, 2 t. 10 c.
Christiania, 18 2
Gothenburg, 33 6¼
Aalesund, 62 5
White Lead—
Calcutta, £93
Zinc White—
Calcutta, £86

TYNE.

Week ending October 31st.

Alkali—
Savona, 30 t. 13 c.
Copenhagen, 40
Rotterdam, 1 3
Bergen, 5 7
Venice, 8 12
Amsterdam, 18 2
Antimony—
Hamburg, 15 t.
Rotterdam, 16
Arsenic—
Antwerp, 3 c.
Copenhagen, 11
Asbestos—
Bergen, 1 truss
Barium—
Rouen, 20 t. 10 c.
Hamburg, 2 3
Venice, 7 12
Barium Carbonate—
Hamburg, 153 t. 6 c
Rouen, 78
Bleaching Powder—
Christiania, 27 t. 10 c.
Antwerp, 31 13
Hamburg, 55 5
Gefle, 50 4
Odense, 10 1
Copenhagen, 7 11
Rotterdam, 15 6
Bergen, 10 1
Ghent, 25 1
Venice, 5 16
Amsterdam, 27 11
Carbolic Acid—
Rotterdam, 5 t. 14 c.
Caustic Soda—
Antwerp, 4 t. 18 c.
Hamburg, 27 17
Stockholm, 60 5
Skutari, 5 16
Copenhagen, 8 8
Bergen, 11
Montreal, 49 17
Venice, 41 8
Amsterdam, 1 16
China Clay—
Copenhagen, 15 t. 18 c.
Linseed Oil—
Montreal, 4 t. 17 c.
Litharge—
Hamburg, 8 t. 16 c.
Stockholm, 1 2
Montreal, 12 14
Magnesia—
Antwerp, 2 c.
Hamburg, 1 t. 15
Stockholm, 1
Manure—
Valencia, 170 t.
Paint—
Antwerp 1 t. 5 c.
Copenhagen, 5
Rotterdam, 10
Phosphorus—
Valencia, 4 t. 8 c.
Potassium Bichromate—
Venice, 8 c.
Soda—
Antwerp, 10 t. 2 c.
Savona, 10 11
Stockholm, 35 9
Gefle, 25 3
Svendborg, 5
Smyrna, 16 15
Aarhuus, 5 7
Venice, 51 5
Amsterdam, 32 11
Christiania, 14 14
Soda Ash—
Hamburg, 6 t. 17 c.
Stockholm, 100 12
Skutari, 27 7
Venice, 15 5
Sodium Nitrate—
Venice, 10 t.
Sodium Silicate—
Skutari, 6 t.
Venice, 5 6
Sodium Sulphate—
Antwerp, 10 t. 2 c.
Copenhagen, 11
Venice, 3 8
Sulphur—
Christiania, 300 t. 8 c.
Stockholm, 15
Varnish—
Christiania, 1 c.
White Lead—
Hamburg, 6 c.
Smyrna, 5 t. 2
Montreal, 10 2

GOOLE.

Week ending October 28th.

Benzol—
Amsterdam, 50 cks.
Rotterdam, 122
Chemicals *(otherwise undescribed)*
Ghent, 10 pks.
Coal Products *(otherwise undes.)—*
Amsterdam, 50 cks. 16 pks.
Antwerp, 125
Boulogne, 35 2 cs.
Rotterdam, 210 1
Colours—
Amsterdam, 1 ck.
Boulogne, 4 6 cs. 1 pk.
Harlingen, 2
Rotterdam, 5
Dyestuffs *(otherwise undescribed)*
Ghent, 3 cks.
Hamburg, 42
Rotterdam, 2 cs.
Pitch—
Antwerp, 351 t.

GRIMSBY.

Week ending October 31st.

Chemicals *(otherwise undescribed)*
Dieppe, 4 cks.
Rotterdam, 29 dms.
Coal Products *(otherwise undes.)—*
Dieppe, 134 cks.
Hamburg, 2 cs. 29 pks.
Rotterdam, 1
Colours—
Antwerp, 1 ck. 4 cs.
Dieppe, 3
Hamburg, 73 15
Dyestuffs *(otherwise undes.)—*
Dieppe, 5 cks.

Rouen, 10 — 170
Halifax, — 10 — 10
Catania, 10 9 — 162
Havre, 5 7 3 86

Copperas—
Montreal, 10 t. — — £17
Talcahuano, 11 17 c. — 24

Disinfectants—
Calcutta, 3 t. 7 c. 3 q. £39
B. Ayres, — 1 — 5
Pernambuco, — 5 — 18
Rosario, 1 cs. 1 13 — 56
Rangoon, 1 8 — 10

Guano—
Malaga, 10 t. — — £76

Lime—
Punta Arenas, 3 t. — — £6

Magnesia—
Paris, 60 cs. — — —
Vera Cruz, 6 — — —

Magnesium Chloride—
Nantes, 5 t. 2 c. — £13

Magnesium Sulphate—
Carania, 20 kgs. — — —
Montreal, — 50 brls. — —
Rio de Janeiro, 26 — — —

Manure—
Valencia, 9 t. 13 c. — £75

Naphthol Colours—
New York, 18 cks. — — —

Oxalic Acid—
Boston, 9 t. — — £256
Stettin, 5 10 c. — 164
Rosario, — 4 — 7
Newcastle, NSW., 2 3 — 67
B. Ayres, — 9 3 q. 18

Paint—
Algoa Bay, 1 ck. — — —
Arroyo, 1 — — —
Axim, — 15 kgs. — —
Belize, 12 195 — —
Bombay, 121 cs. 1,043 30 dms.
30 brls. — — —
B. Ayres, 7 51 — —
Cadiz, — — 275 —
Calcutta, 4 10 — —
Callao, 10 — — —
Cavite, 8 — — —
Colombo, 3 — — —
Corinto, — 6 — —
Corunna, — — 15 —
Demerara, 5 brls. 48 — —
Genoa, 2 80 — —
Havana, 1 25 — —
Iquique, 8 — — —
Lagos, — 60 — —
La Libertad, 5 cs. — — — —
Manila, 8 100 — —
Montreal, 50 — — —
New York, 12 — — —
Old Calabar, — — 4 —
Ponce, 2 — — —
San Jose de Guatemala, — — 1 cs
Shanghai, — — 80 dms.
Santiago de Cuba, — — 7 brls.
Sierra Leone, — — 58 pks.
Teneriffe, — 10 — —
Ukaka, 1 — — —
Vera Cruz, 3 cs. 65 — —

Painters' Colours—
B. Ayres, 25 cks. — 100 cs.
New York, 3 — 101 brls.
Para, 23 tcs. 18 46 kgs. 2
Pernambuco, — 20 4 bxs.
Ponce, 3 — — —
Pt. Natal, — 57 22 brls.
Rio de Janeiro, — — 1 cs.
St. John's, N'f'd., 19 — 2 dms.
San Juan, 2 — — —
Sierra Leone, — 100 — —
Sourabaya, — 100 — —
Oporto, 22 — — —

Paraffin Wax—
Hamburg, 5 brls. 5 cs. — —
Marseilles, — 100 — —
Santander, 10 bgs. — — —
Syra, 7 — — —

Phosphate—
Hamburg, 13 t. 6 c. 2 q. £60

Phosphorus—
Trinidad, — 3 c. — £30
Hong Kong, — 1 3 q. 27
Hiogo, 1 t. 16 2 470
Shanghai, — 18 — 180
Tampico, — 5 — 53

Potash—
B. Ayres, — 8 c. 2 q. £3

Potash Salts—
N. Orleans, 26 t. 13 c. — £1,500
Vancouver, 2 10 1 q. 250
Corinto, 4 1 2 477

Potassium Bichromate—
Ghent, 4 t. 17 c. 1 q. £192

Potassium Carbonate—
Boston, 18 t. 4 c. — £325

Potassium Chlorate—
Porto Alegre, 2 t. — — £75
Gothenburg, 12 10 c. — 490
B Ayres, 1 5 — 46
Hamburg, — 10 — 17
Yokohama, 25 — — 841
Hong Kong, 1 — — 39
Bremen, — 10 — 18
Rotterdam, — 5 — 9
Rio de Janeiro, 6 — — 230
Gutujewsky, 1 — — 40
Riga, 10 — — 353
St. Petersburg, 15 — — 510
Calcutta, — 8 — 15
New York, 5 — — 193
Messina, — 6 — 11
Philadelphia, 5 — — 188
Hiogo, 95 — — 886

Potassium Cyanide—
Corunna, — 4 c. — £20

Salt—
Accra, 13 t. — 500 bgs.
Antwerp, 85 — — —
Baltimore, 365 — — —
Belize, 150 — — —
Boston, 500 — — —
B. Ayres, 17 17 c. — —
Calcutta, 2,344 — — —
Cameroons, 16 15 — —
Conakry, 46 — — —
Copenhagen, 69 — — —
Egwanga, 20 1 — —
Galveston, 1,021 10 — —
Ghent, 50 — — —
Halifax, 100 — — —
Hamburg, 350 — — —
Lagos, 199 16 — —
Landana, 10 — — —
Maranham, 17 17 — —
Matadi, 45 — — —
M. Video, 15 — — —
Montreal, 1,099 10 — —
Newcastle, 75 — — —
New York, 298 — — —
N'Kombi, 10 19 — —
Nykjobing, 140 — — —
Old Calabar, 60 4 — —
Para, 72 — — —
Rio Pongo, 49 2 — —
Rotterdam, 250 — — —
St. John, N.B., 300 — — —
Sapeli, 13 7 — —
Santos, — — 200 cs.
Sydney, 49 18 — —
Valparaiso, 13 4 — —
Victoria, W.A., — — 250 bgs.
" B.C., 19 — — —
Opobo, 20 1 — —

Salt Cake—
Antwerp, 81 t. 3 c. — £106
Baltimore, 45 6 — 80

Saltpetre—
Rosario, — 11 c. — £14
Corinth, 1 t. 8 — — 31
Maranham, 1 2 3 q. 26
Para, — 2 — 3
Parnahyba, — 10 — 12

Sheep Dip—
New York, — 5 c. — £8
Wellington, N.Z., 6 t. 5 — — 125
Montreal, 2 5 — 45
Pt. Elizabeth, 6 14 — 75
B. Ayres, 128 19 3 q. 2,921
Belize, — 5 — 9

Soap—
Alexandria, — — 1 cs.
Amsterdam, — — 5 —
Antwerp, — — 1,390 —
Baltimore, 30 bxs — — —
Bathurst, 80 — — —
Bombay, 500 — — —
B. Ayres, — — 48 —
Calcutta, — — 20 —
C. C. Castle, — — 2 —
Cape Town, 75 — — —
Cartagena, S.A., — — 10 —
Cette, 161 — — —
Coquimbo, — — 5 —
Copenhagen, 40 — 32 —
Genoa, 180 — — —
Gibraltar, 165 — 68 —
Gd. Canary, 40 — — —
Havre, — — 477 —
Jersey, 20 — — —
Karachi, 500 — 64 —
Kingston, 1,650 — — —
Landana, — — 2 —
Malta, 165 — 100 —
Manaos, 1,170 — — —
Matadi, 733 — — —
Mellia, 100 — — —
Montreal, — — 800 —
Newcastle, — — 5 —
New York, 8 1 ck. 34 —
Noqui, 20 — — —
Para, 600 — — —
Penang, — — 5 —
Piræus, 46 — — —
Pt. Elizabeth, — 12 bdls. — —
Pt. Natal, 100 — — —
Rangoon, 500 — — —
Rotterdam, — — 400 —
St. John's, N'fd., 40 — — —
St. Nazaire, 50 — — —
Salonica, 25 — — —
San Juan, 190 — — —
Sapeli, 20 — — —
Sierra Leone, 167 — — —
Singapore, 599 — — —
Smyrna, 67 — — —
Sydney, — — 3,500 —
Teneriffe, 50 — — —
Victoria, W.A., 40 — — —
Warri, 1,600 — — —

Soda Alkali—
Alicante, — 35 brls. — —
Adelaide, — 20 — —
Barcelona, — 35 — —
Corunna, — 10 — —
Galatz, — 17 — —
Leghorn, — 165 — —
Montreal, — 30 — —
Quebec, — 20 — —
Smyrna, — 40 — —

Soda Ash—
Antwerp, — — 502 bgs.
Baltimore, 37 cks. — 1,040 —
Barcelona, 66 — — —
Boston, 240 — 200 —
B. Ayres, 185 125 brls. — —
Cadiz, — — 150 —
Calcutta, — 100 kgs. — —
Callao, 9 — — —
Copenhagen, — — 300 —
Corfu, — 50 brls. — —
E. London, — 40 kgs. — —
Genoa, — — 700 —
Ghent, 10 — — —
Hamburg, 25 — 250 —
Maranham, — 70 brls. — —
M. Video, — 100 — —
Montreal, 15 — 200 —
New York, 126 tcs. — 900 —
Piræus, — 50 — —
Rio de Janeiro, 10 cks. — — —
Rotterdam, — — 100 —
Samarang, 13 — — —
Smyrna, — — 200 —
Stockholm, 6 — — —
Trieste, — — 200 —
Venice, — — 500 —
Vera Cruz, 28 — — —
Yokohama, 25 dms. — — —

Soda Crystals—
Barcelona, 10 cks. — — —
Boston, — 140 brls. — —
B. Ayres, — 100 200 kgs.
Calcutta, — — 33 —
Cape Town, — — 20 —
Galatz, — 34 — —
Halifax, — — 77 —
Jersey, — — 50 —
Kingston, — 2 — —
Malta, 50 — — —
Montreal, 200 468 690 —
Alexandria, — 50 — —
Quebec, — 10 — —
St. John's, N'fd., — — 60 —
Toronto, — — 323 —
Valparaiso, — 35 — —

Sodium Bicarbonate—
Alicante, — — 150 kgs.
Amsterdam, 1 ck. — 15 —
Ancona, — — 25 —
B. Ayres, 180 — 220 —
Calcutta, — — 500 —
Callao, — — 5 —
Cape Town, — — 100 —
Copenhagen, 4 — — —
E. London, — — 40 —
Galatz, — — 10 —
Genoa, — — 110 —
Ghent, 20 — — —
Galujcasky, — — 500 —
Halifax, — — 250 —
Hamburg, — — 25 —
Iquique, — 20 bgs. — —
Leghorn, 4 — 270 —
Madras, 50 — — —
Marseilles, — — 20 —
Montreal, 15 — 102 —
Nantes, 6 — 30 —
N. Orleans, — — 20 —
Odessa, — — 350 —
Pt. Natal, — — 80 —
Rosario, — 2 cs. — —
Rotterdam, — — 20 —
St. Petersburg, 100 dms. — — —
Toronto, — — 235 —
Valencia, — — 100 —
Valparaiso, — — 100 —
Victoria, B. C., — — 50 —

Sodium Carbonate—
Boston, 36 brls. — — —
New York, 36 — — —

Sodium Chlorate—
Rotterdam, — — 80 —
Rouen, — — 10 —
Stettin, 144 bgs. — — —

Sodium Hyposulphite—
Portland, O., — — 100 —
Rotterdam, — 13 brls. — —
Sydney, — — 50 —

Sodium Phosphate—
Vera Cruz, 3 cks. — — —

Sodium Prussiate—
New York, 20 cks. — — —

Sodium Silicate—
Constantinople, 15 cks. — — —
Montreal, 25 — — —
New York, 25 — — —
Philadelphia, 5 — — —
Salonica, 26 — — —

Sodium Sulphate—
Hamburg, — 13 brls. — —
Rio de Janeiro, 25 cks. — — —

Stannate Soda—
Vera Cruz, 1 ck. — — —

Starch—
Boston, 15 cks. — — —

Strontia—
Rotterdam, 2 t. 4 c. — —
Hamburg, 1 — — —

Sulphur—
Boston, 180 t. 6 c. — —
Montreal, 59 17 — —
Colombo, 1 1 — —
Punta Arenas, 5 — — —
Kurrachee, 2 2 — —

Sulphuric Acid—
Maranham, — 28 c. — —
Valparaiso, 1 t. 1 — —

Superphosphates—
Barcelona, 74 t. — — —

Tin Crystals—
Trinidad, 3 t. 1 c. 2 q. —

Varnish—
Cadiz, — 26 cs. — —
C. C. Castle, — 2 — —
Gijon, 4 cks. — — —
Lagos, 2 — — —
Maranham, — — 2 dr
Matadi, — — 10 —
Pacasmayo, — — 1 —
Pt. Said, — 1 — —
Pt. Natal, — 1 — —

White Lead—
Vera Cruz, 80 kgs. — — —

Zinc Chloride—
B. Ayres, — 3 c. — —

Zinc Oxide—
Pernambuco, — 9 c. 3 q.

MANCHESTE

Week ending November

Albumen—
Rotterdam, 3 cks. — — —

Alum—
Caiffa, 23 cks. — — —

Ammonium Carbonate—
Copenhagen, 10 cks. — — —
Rotterdam, 9 kgs. — — —

Ammonium Sulphate—
Valencia, 1,492 bgs. — — —

Aniline Colours—
Barcelona, 1 kg. 8 cs. — — —
Hamburg, 8 2 — — —

Aniline Oil—
Barcelona, 10 cks. — — —
Hamburg, 3 dms. — — —
Rotterdam, 10 — — —

Aniline Salts—
Barcelona, 33 cks. — — —

Caustic Soda—
Treport, 30 dms. — — —

Chemicals *(otherwise unde.)*
Antwerp, 12 kgs. — — —

Copperas—
Tripoli, 25 brls. — — —

Cottonseed Oil—
Tunis, 80 brls. — — —

Creosote Salts—
Barcelona, 16 cks.
Glue—
Antwerp, 6 cks.
Barcelona, 38
Rotterdam, 10
Tar Oil—
Hamburg, 1 ck.
Toluol—
Rotterdam, 27 dms.

HULL.

Week ending October 31st.

Ammonium Sulphate—
Bordeaux, 150 bgs.
Benzol—
Amsterdam, 5 cks.
Rotterdam, 24
Bleaching Powder—
Stettin, 39 cks.
Trieste, 25
Caustic Soda—
Abo, 3 cks.
Genoa, 70 dms
Chemicals *(otherwise undescribed)*
Abo, 9 cks.
Antwerp, 26 cs.
Bremen, 2 11 pks
Constantinople, 400
Christiania, 24 5
3,047 slbs.
Copenhagen, 8
Gothenburg, 5
Genoa, 5 25
Hamburg, 10 60
Konigsberg, 3 3 20
Leghorn, 10
Naples, 30
New York, 70 10
Odessa, 21
Riga, 3
Rotterdam, 4 35 16
St. Petersburg, 20 30
Stettin, 4 bdls. 1
Stockholm, 12
Trieste, 16
Cottonseed Oil—
Amsterdam, 571 c.
Antwerp, 867
Bremen, 51
Copenhagen, 200
Fiume, 84
Hamburg, 1,020
Konigsberg, 300
Leghorn, 100
Marseilles, 5,580
Rotterdam, 500
Stettin, 137
Dyestuffs *(otherwise undes.)—*
Abo, 3 cks.
Amsterdam, 100
Constantinople, 4 cs.
Christiania, 25 bgs.
New York, 5 dms.
Rotterdam, 24
Linseed Oil—
Amsterdam, 59 c.
Antwerp, 114
Bergen, 44
Christiansand, 14
Christiania, 374
Copenhagen, 99
Drontheim, 25
Fiume, 1 ck.
Hamburg, 812 c.
Rotterdam, 61
Stavanger, 52
Stockholm, 40
Manure—
Abo, 98 t.
Harburg, 500
Marseilles, 10
Mineral White—
Bergen, 50 bls.
Ochre—
Hamburg, 1 ck.
Rotterdam, 4
Painters' Colours—
Abo, 10 pks.
Amsterdam, 1 cs.
Antwerp, 267 cks. 3 3 dms.
Bordeaux, 2
Boston, 9
Christiania, 2 2
Copenhagen, 1 1
Gothenburg, 1 20
Ghent, 3
Genoa, 7 103 pks.
Hamburg, 2 5
Leghorn, 12
Naples, 4
Palermo, 10
Rouen, 1
Rotterdam, 5 4 10 dms.
St. Petersburg, 50
Stettin, 23
Stockholm, 1 1 4 pks.
Trieste, 4
Pitch—
Antwerp, 70 t.
New York, 17 bgs.
Soap—
Amsterdam, 2 cs.
Bergen, 5
Drontheim, 50
Tallow—
Amsterdam 21 cks
Gothenburg, 10
Stockholm, 15
Tar—
Antwerp, 6 cks.
Dunkirk, 131
Rotterdam, 1
Tar Oil—
Fiume, 1 dm.
Varnish—
Gothenburg, 2 cks. 3 cs. 4 dms.
Stettin, 8 1
Waste Salt—
Stettin, 100 bgs.

GLASGOW.

Week ending November 5th.

Ammonium Sulphate—
Gandia, 50 t. 17 c.
Baltimore, 50 18
Cullera, 76 2½
U.S.A., 51 12¼
Valencia, 76 5½
Barbadoes, 51 3¾
Demerara, 158 7¾
Trinidad, 31 10
Antwerp, 110 3
Mauritius, 101 3
Nantes, 5 2½
Bleaching Powder—
Calcutta, 94 t. 19 c.
Caustic Soda—
Calcutta, 26 t. 11 c.
China Clay—
Rio de Janeiro, 3 t. 5 c.
Coal Products—
Aniline Dyes
Calcutta, £36
Serampore, 35
Creosote Oil
Danzig, £54
Pitch
Madras, £6. 15s.
Christiania, £18
Danzig, 78 t
Antwerp, 453
Hamburg, 10 4 c.
B. Ayres, 75
Canada, 371
U.S.A., 160
Dieppe, 550 11
Tar
Calcutta, £100
Colombo, £12. 9s.
U.S.A., £102
Christiania, 25
Danzig, 1,067 brls.
Canada, 53
Bombay, 20
B. Ayres, 75
Madras, 36
Tar Acids
U.S.A., £33
Tar Oil
Rotterdam, 5 t. 10 c.
Hamburg, 2 11
Coal Products *(otherwise undes.)—*
Rotterdam, £245
Extracts—
Christiania, £22
Gelatine—
U.S.A., £1,043
Hydrochloric Acid—
Trinidad, £22
Iron Sulphate—
Bombay, £62
Lead Acetate—
Bombay, £57
Logwood—
Gothenburg, £127
Magnesium Sulphate—
Melbourne, £39
Montreal, 61
Manganese Oxide—
New York, 10 t. 1 c.
Manure—
Demerara, 28 t.
Falmouth, 8 17 c.
Paint—
Bangkok, £43
Calcutta, 369
Colombo, 48
Hiogo, £18. 10s.
Iquique, £55
Painters' Colours—
Adelaide, £132
Brisbane, 120
Calcutta, 131
Colombo, 83
Amsterdam, 24
Christiania, 56
Trinidad, 33
Bombay, 45
Paraffin Wax—
Danzig, 10 t.
Egypt, £25
Bordeaux, 47
Potassium Bichromate—
Rotterdam, £387
Bombay, 162
Salt—
Calcutta, 5 t. 3½ c.
Salt Cake—
Terneuzen, 301 t. 1¼ c.
Soap—
Calcutta, 2 t. 7 c.
Barbadoes, 2 5
B. Ayres, 5
Sodium Bichromate—
Bombay, 1 t. ½ c.
Nantes, 5 ¾
Starch—
Rotterdam, 2 t. 11½ c.
Treacle—
Algoa Bay, 2 t. 10 c.
Christiania, 18 2
Gothenburg, 33 6¼
Aalesund, 62 5
White Lead—
Calcutta, £93
Zinc White—
Calcutta, £86

TYNE.

Week ending October 31st.

Alkali—
Savona, 30 t. 13 c.
Copenhagen, 40
Rotterdam, 1 3
Bergen, 5 7
Venice, 8 12
Amsterdam, 18 2
Antimony—
Hamburg, 13 t.
Rotterdam, 16
Arsenic—
Antwerp, 3 c.
Copenhagen, 11
Asbestos—
Bergen, 1 truss
Barium—
Rouen, 20 t. 10 c.
Hamburg, 2 3
Venice, 7 12
Barium Carbonate—
Hamburg, 153 t. 6 c
Rouen, 78
Bleaching Powder—
Christiania, 27 t. 10 c.
Antwerp, 31 13
Hamburg, 55 5
Gefle, 50 4
Odense, 10 1
Copenhagen, 7 11
Rotterdam, 15 6
Bergen, 10 1
Ghent, 25 1
Venice, 5 16
Amsterdam, 27 11
Carbolic Acid—
Rotterdam, 5 t. 14 c.
Caustic Soda—
Antwerp, 4 t. 18 c.
Hamburg, 27 17
Stockholm, 60 5
Skutari, 5 16
Copenhagen, 8 8
Bergen, 11
Montreal, 49 17
Venice, 41 8
Amsterdam, 1 16
China Clay—
Copenhagen, 15 t. 18 c.
Linseed Oil—
Montreal, 4 t. 17 c.
Litharge—
Hamburg, 8 t. 16 c.
Stockholm, 1 2
Montreal, 12 14
Magnesia—
Antwerp, 2 c.
Hamburg, 1 t. 15
Stockholm, 1
Manure—
Valencia, 170 t.
Paint—
Antwerp 1 t. 5 c.
Copenhagen, 5
Rotterdam, 10
Phosphorus—
Valencia, 4 t. 8 c.
Potassium Bichromate—
Venice, 8 c.
Soda—
Antwerp, 10 t. 2 c.
Savona, 10 11
Stockholm, 35 9
Gefle, 25 3
Svendborg, 5
Smyrna, 16 15
Aarhuus, 5 7
Venice, 51 5
Amsterdam, 32 11
Christiania, 14 14
Soda Ash—
Hamburg, 6 t. 17 c.
Stockholm, 100 12
Skutari, 27 7
Venice, 15 5
Sodium Nitrate—
Venice, 10 t.
Sodium Silicate—
Skutari, 6 t.
Venice, 5 6
Sodium Sulphate—
Antwerp, 10 t. 2 c.
Copenhagen, 11
Venice, 3 8
Sulphur—
Christiania, 300 t. 8 c.
Stockholm, 15
Varnish—
Christiania, 1 c.
White Lead—
Hamburg, 6 c.
Smyrna, 5 t. 2
Montreal 10 2

GOOLE.

Week ending October 28th.

Benzol—
Amsterdam, 50 cks.
Rotterdam, 122
Chemicals *(otherwise undescribed)*
Ghent, 10 pks.
Coal Products *(otherwise undes.)—*
Amsterdam, 50 cks. 16 pks.
Antwerp, 125
Boulogne, 35 2 cs.
Rotterdam, 110 1
Colours—
Amsterdam, 1 ck.
Boulogne, 4 6 cs. 1 pk.
Harlingen, 2
Rotterdam, 5
Dyestuffs *(otherwise undescribed)*
Ghent, 3 cks.
Hamburg, 42
Rotterdam, 2 cs
Pitch—
Antwerp, 351 t.

GRIMSBY.

Week ending October 31st.

Chemicals *(otherwise undescribed)*
Dieppe, 4 cks.
Rotterdam, 29 dms.
Coal Products *(otherwise undes.)—*
Dieppe, 134 cks.
Hamburg, 2 cs. 29 pks.
Rotterdam, 1
Colours—
Antwerp, 1 ck. 4 cs.
Dieppe, 3
Hamburg, 73 15
Dyestuffs *(otherwise undes.)—*
Dieppe, 5 cks.

PRICES CURRENT. WEDNESDAY, NOVEMBER 11TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids :—			
Acetic, 25 % and 40 % .. .. per cwt.	5/10½ & 8/9		
,, ,, Glacial .. .. ,,	0/-		
Arsenic S.G., 2000° .. .. ,,	1	2	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	22	15	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	21	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	8	2	6
,, ,, (grey) Hull .. .. ,,	8	0	0
Aniline Oil (pure) .. .. per lb.	0	0	11
Aniline Salt ,, ... ,,	0	0	10½
Antimony .. .. per ton	28	15	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	4	4
,, 50/90 ,, ... ,,	0	3	1½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	2	0
Creosote (ordinary) .. .. ,,	0	0	1½
,, (filtered for Lucigen light) .. .. ,,	0	0	2
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	6
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	49	10	0
,, Sulphate .. .. ,,	16	10	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	42	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	15	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	14	15	0
,, *Carbonate (white lead) pure* .. .. .. ,,	16	0	0
,, *Nitrate* .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	10	0
,, ,, (grey) (ex ship .. .. ,,	8	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magne .. .. per ton	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	2	9
Oils :—			
Cotton-seed .. .. per ton	17	10	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	7
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	10	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	20	10	0
,, ,, (Caustic Potash) 70/75 % .. ,,	19	10	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	6
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	5½
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5
,, Borate (Borax) .. .. net, per ton	20	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	8	17	6
,, ,, (74 % Caustic Soda) ,, ,, ,,	7	17	6
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	5	0
,, ,, (pure liquor 90° Tw.) .. ,, ,,	4	0	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	0	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	2	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	8½
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton	7	10	0
(Roll Brimstone) .. .. ,,	6	10	0
,, Brimstone : Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	4¾
,, English Ingots .. .. per ton	63	10	0
Zinc (Spelter) .. .. ,,	17	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

HEMICAL TRADE JOURNAL

AND

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Notices.

munications for the *Chemical Trade Journal* should be and Cheques and Post Office Orders made payable to—

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ments intended for insertion in the current week's issue h the office by **Thursday morning** at the latest.

A LESSON WITH A MORAL.

FOR years the plea of injury to trade has been made an excuse for escaping from all forms of restriction, and it is not only the chemical trade that has used this argument.

It stands to reason that with the increase of competition abroad it is not advisable to impose any conditions that may handicap manufacturers, but although some are disposed to go farther and advocate actual protection, we hardly think that protection in the usual fiscal sense of the word is necessary. Toying with protection is like trifling with edged tools, and it often cuts in places and ways that were never expected. Better the frying pan than the fire.

Yet there is another kind of protection that might well be exercised, and that is what may be termed protection against ourselves, or rather against those who are of us but not with us.

We have often contended that the chemical trade has as much to fear from troubles of local origin as from foreign competition itself, and though the instances in support of this argument have so far been matters of comparatively small moment, there have lately been two striking examples of how these trifles can accumulate until they compel the sufferers to escape from them. In the one case, that of Messrs. Lysaght's removal from Wolverhampton, though bad enough, it only meant a change of *locale* and the attendant loss was not a national one.

The other example is, however, of quite another nature. It is not the transference of an industry from one town to another, but from this country into France. Practically speaking, a French company comes to our assistance, taking over our works at a valuation, while on the strength of the business it is anticipated will be done, *two* works can be opened in France for the manufacture of sulphuric acid and manures. By these changes the Phospho Guano Co. and their works at Seacombe, Cheshire, virtually become extinct, since they will only be kept on to supply the demands of the Mediterranean and Italy. And what is the main cause of all these changes? Simply this—the shipping and dock charges on English manures are prohibitive to English industry. They amount to 35 per cent. of the value of the manures themselves, and, in the face of the increasing competition in France, makers can no longer survive under such a heavy, though indirect, embargo.

French competition in this direction is nothing new, and it says a great deal that the company should have been able to keep on for so long, selling at about 30 per cent. above the current price of French manures, as it was imperative they should, if they were to make the business pay when worked from this country.

It is not so much the competition *per se* that is rendering this change necessary. With an advantage of 30 per cent. in the selling price, and a reputation that has maintained the

sales up to now against all odds, a reduction in price should be a simple thing to effect, yet it is actually an impossibility on account of the heavy dock and similar charges at this end.

Who can wonder that, instead of striving to keep one lean kine here, the pasture is changed to one that can support two, and those fat kine withal? They will be milked by others, it is true, but better to spare of your abundance to the stranger, than starve upon the leavings of your kindred.

The most disconcerting thing about the whole affair is not so much the present circumstances as the prospect for the future. From trifling examples we have slowly progressed to others of higher significance—and what is the next to be? Cannot the suffering ranks of industry at least be re-inforced by homely co-operation? And if they could be, would not the bogey of State interference be laid, and the fears of external competition lulled into oblivion? There are those who so opine and are fit judges to boot.

THE BIRMINGHAM WATER-GAS PLANT.

THE water-gas plant, which is now in operation at the Windsor Street Works, Birmingham, has been supplied by the Economical Gas Apparatus Construction Company, of Toronto, and is contained in a brick building of neat design, measuring about 9 ft. by 51ft., and rising to a height of 38ft. The portion in which the producers are placed is in two floors, the feeding in of coke and the manipulation of the various valves being conducted upon the upper floor or iron stage. Upon the ground level there is first a boiler-house and a machinery room. The boilers provided are two Babcock and Wilson tubular boilers, each of 125 nominal horse-power, and their furnaces are so constructed as to allow of the smallest coke being used for raising the steam necessary for conversion into gas, and for driving the machinery by which the circulation is maintained. The machinery consists of two Tangye engines, driving two Sturtevant fans, and a pair of gas-exhausters. The fan blast supplies a forced draught to the boilers, and is also used for raising the heat of the coke through which steam has to be drawn. It is in the two-storeyed part of the building where the actual gas-making takes place. The producers are slightly oval, their longest diameter being 12ft., and the shortest 10ft, while they are about 15ft. high. In the inside they have a thick lining of fire-clay material. The first of these structures is the generator, and is simply a huge pile of burning coke. By turning on the air blast for five minutes this body of fuel is brought to a great heat, the "producer gas" passing from it into the second cylindrical structure, and heating its fire-clay walls and an arrangement of baffle bricks to redness. At the end of the five minutes the blast is shut off and steam is admitted for seven minutes. Illuminating qualities are imparted to the gas in the "carburetter," where, in passing through, it meets with three sprays of heated petroleum. The petroleum used is known as Russian solar distillate, the specific gravity of which is nearly ·80. There appears to be a ready affinity between this spray and the water-gas, while the superheating of the mixture in a further cylinder upon the floor above converts it into a permanent or fixed gas. Seven minutes' run deadens the coke, and produces for a single converter about 10,000 feet of gas. The heat of the coke has then to be renewed, so the current of steam is shut off and the air-blast turned on for five minutes. An arrangement of valves allows the blast to be either upwards or downwards; and the process of blow and steam can be kept on steadily, except for an interval of about an hour for clinkering. The gas then passes to the purifiers, being cooled on its way so as to deposit the tar, &c. With regard to the amount of sulphur to be removed it may be mentioned that the amount of sulphur in water-gas is very much smaller than in that made from coal. After purification the water-gas is stored in a separate holder, from whence it is drawn to the storage gas-holders, where it is mixed with coal-gas.

The foregoing are the salient features of the plant. Among the accessories may be mentioned the coil for heating the oil before it is converted into spray, the pump by which the jets of oil are driven, and an oil meter. The coke for the generator is supplied to the upper floor by a steam hoist, and placed in a funnel-shaped barrow, holding about half a ton. The bottom of this vessel fits the trap-door at the top of the converter, and its contents are shot down in a few moments when additional fuel is required. When the duplicate plant is in operation it should yield two million cubic feet of gas per day of twenty-four hours, or about a quarter or a fifth of the average output of the Windsor-street Works, while the further extension, for which room is provided, will bring up the capacity to a third of the present o A similar proportion will hold good in connection with the install at the Saltley works. The labour employed for the double now being laid down at each works will be five men for each hour shift, or fifteen men in all for twenty-four hours, with the ad of two men for an hour per day to do the clinkering. The this for a plant of two million cubic feet of gas per day is less th eighth of what would be required to attend to coal carbonising of corresponding capacity. The "solar distillate" used for the duction of the gas costs at the present time 3d. to 4d. per g The tank for storing the oil at Windsor Street is a cylindrical 60ft. in diameter and 25ft. high, and will contain over 400,000 g of oil, or about enough for the winter six months' use. It is princ to enable the Gas Department to cope with the winter demand that resort has been made to the help of water-gas. It has, howev further advantage of being an extremely convenient means of lating the illuminating power of the gas. By increasing the qu of oil, the water-gas can be made with as high an illuminating as thirty candles, and this can be used for enriching coal-gas of paratively low standard. The other advantages are that it enabl Department to use up a large amount of its coke when this pro dear; and they can also turn on the apparatus to a greater extent in proportion to the price they have to pay for coal. Th of the present installations will be within the estimate of £6 originally given, and this compares with an outlay of £13 which would have been involved had coal gas plant to be provi equal capacity. The work has been carried out under the direct Mr. Merryfield, one of the inventors of the apparatus, subject general supervision of the engineers of the Gas Department.

IMPORTS AND EXPORTS FOR OCTOBER.

THOUGH it is necessary to admit that the Board of Trade r are as a whole satisfactory, there is, nevertheless, nothing satisfactory about the chemical section. The imports of chemical oils are lower, and so are the exports of alkali by about 23 per ce value. There is also a falling off in the value of the salt expo the extent of 4·9 per cent. The increased imports of oil seed is noticeable.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE.

Articles.	Quantities. 1895	1896
Margarine ..... Cwt.	92,422	58,6
Copper Ore and Regulus..... Tons.	20,587	18,3
Pyrites..... ,,	40,359	38,2
Tin ..... Cwt.	74,443	75,5
Alkali ..... ,,	13,042	12,0
Brimstone ..... ,,	39,663	28,8
Dyes, Coal Tar ..... £.	66,913	69,1
Saltpetre ..... Cwt.	19,333	17,7
Petroleum ..... Gall.	15,248,848	17,169,4
Turpentine ..... Cwt.	64,315	29,7
Guano..... Tons.	1,425	1
Nitrate of Soda ..... ,,	7,237	2,5
Paraffin ..... ,,	70,168	83,6
Rosin ..... Cwt.	114,494	35,0
Tallow and Stearine..... ,,	36,463	135,8
Oil Seed Cake ..... Tons.	21,060	26,7
Wood Pulp..... ,,	28,114	6,9

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

Articles.	Quantities. 1895.	1896.
Alkali ..... Cwt.	624,089	447,7
Cement .. .. Tons.	31,532	32,5
Coal and Coke ..... ,,	3,068,587	3,036,7
Copper, all kinds ..... Cwt.	114,581	74,4
Iron and Steel ..... Tons.	268,333	344,6
Chemical Manures ..... ,,	23,093	26,6
Oils, seed ..... ,,	3,995	5,6
Salt ..... ,,	70,417	66,4

ELECTRICAL TRADES' DIRECTORY.—"The Electrician" Pri and Publishing Company, of 1, 2, and 3, Salisbury-court, Fleet-st London, have in preparation the 1897 edition of "The Electri Electrical Trades' Directory and Handbook," and invite all pe engaged in the electrical and allied trades to forward names, des tions, and addresses, which are inserted free of charge. Correctio existing entries are also requested.

The Patent List.

This list is compiled from Official sources in the Manchester Chemical Laboratory, under the immediate supervision of Edge E. Davis and Alfred R. Davis, who report professionally on the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Extracting Gold and Silver. B C. Molloy. 24,417. November 2.
Improvements in Filters S. Starkey. 24,434. November 2.
Centrifugal Separators. E. Nylén. 24,513. November 3.
Manufacture of Artificial Musk. A. Blaikie. 24,568. November 3.
Producing Chloride of Zinc and Chlorine. C. Hoepfner. 24,573. Nov. 3.
Sewage Filters and Apparatus. F. P. Candy. 24,588. November 3.
Using the Exhaust from Gas Engines for Heating Purposes. H. N. Bickerton. 24 656. November 4.
Recovering Gold and Silver from Cyanide Solutions containing them. C. Jennings. 24,673. November 4.
Manufacture of Fine Substances for Use in Preparation of Portland Cement, Pigments, etc. R. Hunter. 24,711. November 5.
Improved Soap or Washing Compound. F. L. Bartelt. 24,727. Nov. 5.
Rustic Detergent. F. L. Bartelt. 24,728. November 5.
Grinding and Disintegrating Superphosphates. O. Heymann and A. Nitsch. 24,776. November 5.
Drying Peat. A. Schoenemann 24,809. November 5.
Improved Tanning Process A. M. Clark. 24,812. November 5.
Manufacture of Glue and Gelatine Cakes H. Meister. 24,819. Nov. 5.
Filtering Media. E. W. Lucas. 24,826. November 6.
Treating Sewage Sludge. B. Walker. 24,833. November 6.
Apparatus for Roasting, Calcining, etc. F. Brandenburg. 24,869. Nov. 6.
Improvements in and Apparatus for the Manufacture of Margarine. W. McDonnell. 24,875. November 6.
Using Blast Furnace Slag to form Compounds for Use in Agriculture and the Treatment of Sewage Effluents T. Twynam. 24,879. Nov. 6.
Leather Substitute. L. de Banville, J. F. Rouleau, and L. V. Raucelant. 24,885. November 6.
Filtering Sewage and the Construction of Filters. T. Hall and J. Davies. 24,891. November 6.
Method and Apparatus for Removing Scale and Rust from Iron H. H. Leigh. 24,898. November 6.
Extracting Tannin and Resin from Hops for Brewing Purposes. R. D. Bailey. 24,945. November 7.
Electric Batteries. J. L. Dobell. 25,036. November 7.
Localising the Carbonizing of Iron or Mild Steel Articles where the Whole Article is Exposed to the Action of Carbonizing Agents. A. R. Vellacott. 25 045. November 7.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

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Improvements in and connected with the Manufacture of Material for Filtering Water, Sewage Effluents, Saccharine Juices, Alcoholic Liquors, Illuminating Gas, and other liquids and fluids, and for use in the Manufacture of Steel. G. MacDonald, 7, Quality-court, Chancery-lane, London. Eng. Pat. 19,932. October 23, 1895.

The material is virtually magnetic oxide of iron. Various ways of treating it are described, but the following constitutes the substance of the patent. Pyrites, the waste from aniline works or suitable ores, are crushed to about the size of a nut, and heated on perforated trays supported in ordinary fire-clay gas retorts Petroleum waste, paraffin oil, or sugar waste is then injected into the retorts in the form of a spray. This treatment is continued at a dull red heat until the material is sufficiently reduced, that is to say until it becomes magnetic and contains a proportion of oxygen intermediate between ferrous and ferric oxide. By prolonging the treatment a product rich in carbon is obtained which is suitable for use in the manufacture of steel. There is one drawing showing a section of the retort and its fittings.

Improvements in and connected with the Manufacture of Alkaline Phosphates and Caustic Alkali. W. P. Thomson, 6, Lord-street, Liverpool (Communicated by the Chemische Werke vormals H. and E. Albert, Biebrich a/ Rhine, Germany.) Eng Pat. 23,572. December 9, 1895.

Solutions of phosphoric acid and nitrate of soda are electrolysed the formation of nitric acid and sodium phosphate. If the phosphoric acid solution is strong enough the salts fall at the cathode and are "fished." The nature of the salt depends on the duration of electrolysis. The phosphates so obtained may be applied to the manufacture of caustic alkalies; for instance, with caustic lime. A suitable apparatus is shown. It consists essentially of a wrought iron tank lined with cement, and divided into two compartments by a diaphragm of asbestos or other suitable material. An anode of carbon and a cathode of lead are provided, which dip into a solution of salt or nitrate of soda on one side and phosphoric acid on the other. It is claimed that the cost of decomposing is covered by the recovery of the phosphoric acid as phosphate of lime during the causticising.

Improvements in the Manufacture of White Lead. A. B. Browne, 119, Water-street, Boston, Mass., U.S.A. Eng. Pat. 14,988. July 7, 1896.

The process is an electrolytical one. A sodium nitrate (or acetate) solution is electrolysed, using a lead anode and a copper cathode. The nitric acid goes to the anode and attacks it. This product, and the alkaline hydrate formed at the cathode, are drawn off and again mixed in a common receiver, where the acid and alkali re-unite to form neutral sodium nitrate, and lead hydrate is precipitated. The latter is removed by filtration or pressing, the solution returned to the cells, and the lead hydrate treated with carbon dioxide to form basic amorphous carbonate, which is subsequently dried for use as a pigment. The formation of the electrolyser is important. It is divided into three compartments by two diaphragms. The anode and cathode are placed in the two exterior compartments. The level of the solution in the centre compartment is kept higher than in the other two, thereby preventing the percolation of the alkaline solution into the acid compartment. The formation of sub-salts of lead in the anode compartment is avoided by the addition of free acid, or maintaining the density of the nitrate solution below the point at which such salts form. There is one drawing which shows the general a rangement of a suitable plant and particulars of the electrolyser.

Improvements in the Manufacture of Manure. N. F. Bourgeois de Mercey, La Faloise (Somme), France. Eng. Pat. 6,405. March 23, 1896.

The object is to prepare artificial "humus" on the commercial scale. A very lengthy, though interesting, definition of humus is given, and the prevailing ignorance on this subject combatted as far as possible. The patentee defines humus as the saline substance resulting from the combination of humic acid with a base, notably lime. A process is then described for manufacturing precipitated humus, which consists of treating peat with water and lime, whereby a precipitate is synthetically formed, having properties similar to naturally formed humus The precipitate can be dried and mixed with supers and potash salts for furnishing a complete fertilizer.

Improvements in the Treatment of Sewage and in the Obtention of Valuable Products. J Hargreaves, Farnworth-in-Widnes, Lancs. Eng. Pat. 23,064. December 2, 1895.

Chlorides are electrolysed with the formation of alkalies, while the chlorine is turned into the sewer which adjoins the plant. By reason of its high specific gravity the gas collects on the surface of the sewage and is absorbed. Its localisation is effected, if desirable, by the aid of curtains depending from the crown of the sewer and dipping into the sewage. With a view to economy the electric energy may be derived from an electric lighting plant which is thus rendered serviceable during the day for electrolytic purposes. As an alternative the chlorine can be passed into water and the chlorinated liquid run into the sewers.

Improvements in the Production of Compositions for Treating Sewage Matters or other Foul Waters. G. C. Kinloch, 42, William-street, Heywood, Manchester, and C Heap, Caldershaw Mills, Spotland, Rochdale. Eng. Pat. 20,355. October 29, 1895.

Nitre cake is mixed in suitable proportions with shale, bauxite, clay, or any similar substance containing iron and alumina The ingredients are well pulverised and ground together, mixed with water, or water and dilute sulphuric acid, and pressed into blocks, which eventually set quite hard. During this hardening the materials re-act to form compounds of iron and alumina of sufficient strength to precipitate sewage. Being prepared in the cold, disinfectants, such as carbolic acid, creosote, etc., can be incorporated simultaneously. Additional quantities of iron and alumina salts can also be introduced without interfering with the hardening of the blocks.

An Improved Respirator. O. Von Horstig, 11, Roonstrasse, Saarbrücken, Germany. Eng. Pat 17,115. August 1, 1896.

A frame of caoutchouc or leather, fitted with inlet and outlet valves, is held to the face by a wire ring or cord and bands which pass round the head. It covers the nose and mouth, and has a filter bag attached, which is filled with asbestos, felt, infusorial earth, or other filtering *media*. If necessary it can be charged with disinfectants or substances that are beneficial to the throat. There are two figures.

THE DOVER COALFIELD.—The water in the No. 1 shaft of the Dover Coal Company is still 200 feet deep. Sinking operations are confined to the second shaft.

Official Memoranda.

(From the Board of Trade Journal.)

CUSTOMS TARIFF OF VICTORIA.

The following is a special abstract of the duties leviable on goods imported into the colony of Victoria, being continued from p. 274 :—

	Rates of Duty.
Rosin oil in bulk	*Free.*
Salt	£1. per ton.
Salt (brown, rock)	*Free.*
Sheep wash, including tobacco soaked in turps	*Free.*
Silver nitrate	*Free.*
Soap, general	2d. per lb.
Soap, perfumed and toilet	4d. per lb.
Soda crystals	£2. per ton.
Stearine	1½d. per lb. After Jan. 1, 1898, 1d. per lb

TARIFF CHANGES AND DECISIONS.

The import of almost all Anglo-Indian and European goods is prohibited in Russian Turkestan. Among the eight articles admitted is *indigo*, which is dutiable at 6 paper roubles per pood (= 36 lbs. avoir.).

At Manila an export duty of 50 centimes per 100 kilos. was imposed on *indigo* in October. The import duty on *salt* is now 1 dollar per 100 kilos., and a similar duty applies to *petroleum* and mineral oils.

The Customs of the United States have made the following decisions :- *Tannin powder*, being an extract from nut galls, is dutiable as tannic acid at 60 cents per lb. *Potassium carbonate* is entitled to free entry. *Talc* in the form of tailors' chalk is assessed at 20 % *ad val.* Ground barium carbonate (witherite) has to pay 20 % *ad val.* also.

BRITISH HONDURAS.

The following dues are now in force in this colony :—

	Rates of Duty. dols.
Candles, tallow ..... per lb.	0·01
Candles, other sorts ..... ,,	0·02
Oils, mineral, above 130° flash test .... per gall.	0·03
,, below ,, ... ,,	0·06
Soap ..... per 100 lbs.	0·25

All goods not duty free, and not otherwise charged, are rated on invoice or assessed value at the rate of 10 %.

Duty free :—Cement and lime, coal and coke, agricultural and manufacturing machinery, manures and other fertilizers, pumps and other water-raising appliances, salt (except table salt), logwood and other indigenous dyewoods. There is an *export* duty on logwood, however, of 0·5 dols. per ton.

THE CINCHONA PLANTATIONS OF MADRAS.

The Revenue Department of the Government of Madras have issued a report by the Director of Government Cinchona Plantations on the administration of the plantations.

The report states that the Dodabetta plantation, in the opinion of Dr. King, is the most valuable of all those possessed by Government on these hills, in consequence of the large number of crown bark or quinine-yielding trees growing there. The natural situation of the plantation, after a trial of 35 years, has proved itself to be adapted for the successful growth of this kind of cinchona, and one of the elements of success must be attributed to the good management of the estates under the present superintendent. 91,400 lbs. of bark were collected during the year from the coppicing of 12½ acres and various thinnings. The severe frost of January, which killed over 3,000 trees, rendered compulsory the harvesting of a large quantity of bark. It has become difficult to know where to take the crop on Dodabetta, as some of the oldest trees still respond to high cultivation by giving richer bark, and in very few plots are there any trees in such a sickly condition as to require felling or uprooting. In order to overcome this difficulty to some extent, a system of intermediate coppicing is being carried out. This system may be thus explained. A plot is taken where the trees have reached the age of 20 or more years, and the bark of which contains a maximum amount of quinine, owing to the liberal application of manure to the land about two years previously. A row of these trees is cut out, and the bark harvested, and the stumps of the trees trimmed as in ordinary coppicing. The next row of trees is left standing, but the alternate rows are all cut down until the boundary of the plot is reached. The trees that are left continue to grow, and the bark thickens, and at the same time they afford shade for the young coppice shoots. When the shoots are sufficiently advanced, the old trees in their turn will be ready to be coppiced and barked, and the succeeding coppice shoots will have shade and protection provided for them. It has been found that the entire coppicing of a plot oft results in failure due to the absence of suitable protection for the you shoots.

With regard to the Nedivattam plantation, a large quantity of bark, amounting to 94,600 lbs, was taken during the year fr different varieties of cinchona trees. There is a great variation in weight of bark yielded by the different species ; for instance, succirubra trees on the old plots yielded on an average 33 lbs. green bark per tree ; some large magnifolias, 27½ lbs. ; the officina 9½ lbs, and some young hybrid, 2½ lbs. A number of the old su rubra and magnifolia trees were cut down, not so much for their ba which does not perceptively increase in value after a certain age, for their wood, of which a large stock is needed for fuel in the fact Over 8,000 renewals were put out during the year, and about 58,0 failures were restored in the younger portions of the estate.

The young trees on the Hooker estate are doing very well, but s of the larger trees on the ridge have a sickly appearance. Some of trees that were coppiced in 1894, because of their dying condition, h thrown out shoots ; but these appear to be unhealthy, and some h died out. The part of the estate where these trees have been grow is in an exposed position, and the soil is not of the best descripti A belt of blue gums will be allowed to grow up and form a shelter this plot, and the land will be well manured before any serious wor again undertaken there. 7,750 officinalis plants were put out du the year.

In accordance with the suggestion of Dr. King, who inspected wood estate in July, and an order from Government, instructions w issued to abandon this estate. All the trees were cut down uprooted, and the bark was harvested before the end of the year. fire broke out in the estate in February and cleared the ground of leaves and twigs of cinchona, and thus made the work of aband ment complete. The number of trees uprooted was 20,484 hybrids 110 succirubras, and the amount of bark taken from them was 130, lbs. of green hybrid bark and 1,320 lbs of red bark.

There remained in stock at the beginning of the year 195,129 lbs. bark ; this, with the quantity harvested during the year, made 424, lbs. Of this quantity 234,457 lbs. were disposed of during the year.

The manufacture of quinine and febrifuge was carried on continuo during the year until the end of February, when the fusel oil ran o At the usual rate of consumption the oil would have lasted to Apr but in October the work of the factory was very much increased, a the chemicals were used in larger quantities than was foreseen at beginning of the year.

The quantity of quinine turned out at the factory at Nedivattam 3,600 lbs. ; there remained in stock at the end of the previous y 4,984 lbs., making in all 8,584 lbs.

The quantity of febrifuge manufactured at the factory during the p official year was 2,284 lbs. ; there remained in stock at the beginn of the year 1,946 lbs., making in all 4,230 lbs.

PRODUCTION OF TARTARIC MATERIALS IN ITAL

A report, dated 27th October last, has been received at the Fore Office from Mr. Neville Rolfe, Her Britannic Majesty's Consul Naples, transmitting a statement showing the total production tartaric materials in Italy for the 12 months ended 30th Septembe 1896, to have been 7,253 tons of the value of £418,025. The exports the United States reached 3,471 tons, to the United Kingdom, 728 tons ; to Germany, 819 tons ; to France, 244 tons ; and to oth countries, 1,990½ tons.

MINERAL DISCOVERY NEAR BARMILL.—The lands of Dockra a Balgraymuir are about to be opened by the Glengarnock Iron and C Company, iron ore having been found in large quantities, warrant the sinking of two pits.

HULL AND DISTRICT CHAMBER OF TRADES—At a council of t above held on Friday, the 13th inst., the following resolution was s mitted by the President and carried unanimously : "That this Coun recommends that steps be taken to arrange a Conference, to be held Leeds, of representatives of Trade Associations with a view to t formation of a National Chamber of Trades."

FIRE AT A TANNERY.—About 9 o'clock last evening an outbre of fire was discovered at the extensive tannery of Messrs Bevington Sons, Neckinger Mills, Bermondsey, S.E. Fire engines from Tool street, Rotherhithe, and Old Kent-road were quickly on the spot, a fortunately were able to confine the fire within narrow limits. The f was in close contiguity to the stables of the London Grist Mills Co pany, and it was found necessary to remove the horses and a quan of hay and straw, the latter being removed just in time to prevent ignition. The fire was got under by 10 o'clock. It is believed to ha been caused by the overheating of a stove in the japanning depart

Legal Intelligence.

CHANCERY OF LANCASHIRE.

(Before Vice Chancellor Hall, Q.C.)

ALMA VENEER FELT COMPANY *v.* FISHER.

Tuesday the Vice Chancellor delivered judgment upon the motion by fendant in this action to vary the finding of the Registrar, the hear- which occupied the Court for four days last week. The plaintiff, lma Veneer Felt Company, Limited, of 15, High-street, Man- r, are the owners of certain letters patent, taken out by a Mr. ham, for "veneering" and "dusting" felt hats with small les of fur. The defendant, Robert William Fisher, of Stamford s, Fitzroy-street, Ashton-under-Lyne, obtained a licence in 1893 the plaintiffs' patent in the manufacture of felt hats. The lant had to make monthly and half-yearly returns of the number s to which he applied the plaintiffs' patent, for the purpose of aining the amount of royalty due from him to the plaintiffs. In 1895, the plaintiffs commenced an action against the defendant account to be taken by the Court of all hats veneered, &c., by fendant under the licence. The action was dismissed by this , but the Court of Appeal reversed the decision, and directed the nt to be taken. Thereupon the defendant filed accounts corre- ing with those with which he had already furnished the plaintiffs, the matter being investigated in Chambers the Registrar came to nclusion that the book kept by defendant could not be relied upon, rtified that there was a further sum of £85 7s. 10d. due from the lant to the plaintiffs, in addition to the amount already paid. The nt motion was an appeal by the defendant against this finding of the trar, on the ground that the accounts which he had filed correctly ented the number of hats to which he had applied the plaintiffs' , and that the amount he had paid was the whole sum for which s liable under his licence. Mr. Astbury, Q C., and Mr. Radford red in support of the appeal, and Mr. Bradbury and Mr. Eastwood ented the plaintiffs.

Vice Chancellor, in giving judgment, detailed the facts of the as above mentioned, and said the defendant's counsel took a inary objection that the Registrar had taken the account on the of fraud, but he considered that there was nothing in that pre- ry objection, as the Registrar was bound to take the account ing to the evidence placed before him. The dispute had mainly on the reliability of an account-book kept by the defendant of s veneered or dusted by him. The defendant said the book was ect account, but the plaintiffs attacked it on grounds which ged the honesty of the defendant. In support of their attack, a amed Cook and his brother had come forward with an extra- ry story of conspiracy on the part of the defendant, but he did lieve that story, and the defendant was entirely exonerated from arges made by these two men. With regard to the money given . Cheetham, the patentee, to Cook and another man, his Honour was a very unfortunate and a very dangerous thing to do. The Chancellor went on to say that the method of applying the ffs' patent was by placing hat bodies in a liquid in which ground d been mixed, and the ground fur adhered to the hat bodies. laintiffs called evidence to show that in the dyeing of hats at the lant's works undusted hats were placed in the same dye-kettle as ed and dusted hats, and that by this means particles of fur which off the veneered and dusted hats adhered to the undusted hats, thus became dusted, though not as perfectly as the properly hats. Defendant met this with a positive denial, and said that e-kettle was thoroughly cleansed after the dyeing of the veneered sted hats and before the dyeing of the undusted hats. But that t true, because it was shown that the dusted and undusted hats given out indiscrimately, and if they went indiscriminately through e-kettle they must have become dusted. It was clear that those ed hats which became dusted in this way were not included in the ant's books, yet that would be a dusting for which the defendant ible to pay royalty. The defendant said that the book was care- hecked, but the evidence showed that there was no real checking, was confirmed in his belief of the incorrectness of the defendant's by the amount of fur which had been used in his works. Although uld not have convicted the defendant of impropriety upon the ce of the witness named Waugh, he was not sure whether Waugh t right in saying that he saw a book at the defendant's works ning incorrect entries. But it was not necessary for him to say er the defendant acted honestly as regarded the dyeing operations, ether the book was improperly kept. All that it was necessary n to say was that the defendant had not accounted for all the n which he was liable to pay royalty to the plaintiffs. The n was how much the defendant was to pay. It was obvious me of the undusted hats would be put in the dye-kettle when was no fur in, and would thus not get dusted, but he thought the allowance of 10 % which the Registrar had made in respect of those undusted hats was reasonable under the circumstances. The result would be that the motion to vary the finding of the Registrar would be dismissed, with costs. The defendant, however, would not have to pay the costs of the two discredited witnesses named Cook.

On the application of Mr. Radford his Honour granted leave to appeal on the terms that the defendant pay the £85. 7s. 10d. into court, and pay the plaintiffs' costs to the plaintiffs' solicitor, on his undertaking to refund them if the decision should be reversed.

EXTENDING THE BIRMINGHAM SEWAGE FARM.

THE Tame and Rea District Drainage Board have this week made public by a lengthy statutory notice their intention to apply to Parliament for various powers in connection with the scheme for the extension of the sewage farm and works. The scheme to which the notice relates was before the Drainage Board in April last, and contemplates the acquisition of additional land, of which the principal portion is an area of about 807 acres, situated immediately below the present farm boundary, and bounded on the north by the Tamworth-road, on the south by the river Tame, and on the east by the road from Curdworth Bridge to Dunton. There are also other plots proposed to be taken, which make up a total of close upon 1,200 acres. Certain property owners have come to terms with the Board, but in other cases compulsory powers are required, and the proposed application to Parliament schedules all the plots which it is probable may be required, including the freehold of some land already used for the sewage farm under leases. Powers are also sought to make new conduits ; to acquire the mills which give the name to the locality, known as " Forge Mills ;" to deepen and otherwise interfere with the River Tame, its weirs and sluices ; to erect a pumping station near Minworth, so as to permit of irrigation upon land above the gravitation level ; and to carry out other works, and to borrow the requisite funds necessary to the extension of the sewage farm and works. The total capital expenditure contemplated is £244,500., exclusive of the water rights of Forge Mills and the costs attendant upon Parliamentary or Local Government Board proceedings. Printed copies of the Bill will be deposited on or before the 21st of December.

CLOVER CROPS AS FERTILIZERS.

THE different varieties of clover have long been held in high esteem by practical farmers in all parts of the world as most useful plants to plough under as green manure for the benefit of future crops. Clovers, in common with most other leguminous plants, have the power of taking nitrogen—the most expensive of all fertilizers to buy—from the air and of storing it upon their tissues. Many experiments have been made to determine approximately the quantity of nitrogen which may be added to the soil per acre by ploughing under a crop of green clover, and recent calculations place it at 158lbs. per acre, there being also 35lbs. of phosphoric acid, and 155lbs. of potash. While some of the nitrogen stored up is no doubt taken from the soil, a large proportion of it is gathered from the air, in which unlimited stores exist. It must be borne in mind that the phosphoric acid and potash are taken by clovers entirely from the soil, but, as the root system extends deep and wide, stores are gathered which other plants do not reach, and these are laid up in the tissues, and when ploughed under are soon converted into plant-food available for succeeding crops. The quantities of these three important elements of fertility, which are taken from the soil by some of the more important agricultural crops are given below in lbs. per acre, and they will serve to show the importance of the clover crop as a fertilizer :—

	Nitrogen.	Phos. Acid.	Potash.
A wheat crop of 25 bushels per acre with 2,200 lbs. of straw takes about	40·53	17·64	19·11
A barley crop of 35 bushels per acre with 2,000 lbs. of straw takes.....	45·48	17·14	28·25
A crop of oats of 50 bushels per acre with 2,200 lbs of straw takes.....	46·3	15·22	32·88
A crop of Indian corn grown for fodder to the period when the ears are in the late milk or glazing stage of 15 tons per acre takes	87·	44·40	98·10
Turnips, roots only 15 tons per acre.....	49·50	27·90	82·50
Mangels, roots only 15 tons per acre	45·45	27·60	114·90
Carrots, roots only 15 tons per acre	35 25	33·30	97·95
Sugar beets, roots only 15 tons per acre ..	71·85	28 80	135·90
Potatoes, tubers only, 200 bushels per acre	25·20	8·40	34·80
Hay, average of many analyses, two tons per acre.....	62·00	16·40	52·80

Reports of Companies.

THE PHOSPHO-GUANO CO., LTD.

An extraordinary general meeting of the Phospho-Guano Company, Ltd, was held at the City Terminus Hotel, Cannon-street, E.C., on Friday 13th inst. Mr T. Chilton (chairman of the company) presiding. The meeting had been convened for the purpose of considering resolutions whereby the company would be voluntarily wound up, the chairman and Mr. A. H McPherson (managing director) be appointed as liquidators without cost, and a provisional agreement between the company and Messrs. Lefebvre Frères, of Paris, forming a French limited company for the purpose of manufacturing and selling sulphuric acid and all manures and improvements thereof. The shareholders were asked to confirm an agreement conveying to the French company the real property and undertaking of the Phospho-Guano Company, in consideration of the allotment to the English company of fully paid-up shares in the French Company. The Chairman said the directors had never tried to hide the fact that the competition with the company's trade in France was increasing, and that they viewed that increase with alarm. The competition had now culminated, and the company must either make some fresh arrangement or give up trade. Although the company's business had not been so satisfactory as the directors wished, he nevertheless found that during the past twenty years they had paid in dividends out of £110,000. of capital no less a sum than £157,000. In France, where they had to fight very powerful companies, the Phospho-Guano Company had maintained its trade up to now, although it had been selling at 30 per cent. over the French rates for phospho-guano, and 20 per cent. over the French prices for superphosphates Consequently, there was no hope of increasing their trade, and of late there was abundant evidence that it would be useless to continue the present competition unless a company could produce their manures at prices equal to those of the French companies, whose trade was rapidly increasing, while that of the Phospho-Guano Company was decreasing. By what was proposed the shareholders were not required to find any further capital, but in future the works would be in France. The sum of £40,000 was required to place the company in a proper position, and Messrs. Lefebvre Frères had offered to provide this capital on the terms set out in the circular which had been issued to the shareholders. The circular stated that the conditions under which the sum mentioned would be provided embraced the formation of a new French company with a capital of about 2,500,000f., or £100,000, the whole of the Phospho-Guano Company's stock being taken over at a price to be fixed by experts, and paid for in shares of the new company. The works at Seacombe were to be taken over at a valuation of £10,000, and paid for in the same way. These conditions were to be accepted by holders of not less than 20,000 shares in the Phospho-Guano Company. The actual amount of the shares in the new company divisible among the shareholders of this company would depend on the amount of the valuation of the stock, but the directors believed that under the proposed arrangement the shares of this company would at least realize from £2. 15s. to £3. each. Under the circumstances, the proposals contained in the resolutions he was about to move were, after due consideration, deemed the best the company could adopt. The Chairman then moved the first of the resolutions constituting himself and Mr. M'Pherson liquidators for the purpose of winding up the affairs of the company. Mr. Wood seconded the resolution. Mr. Cochrane, who thought that a better arrangement than was now proposed was possible, moved as an amendment that the meeting be postponed for a month in order that in the meantime the directors might communicate with the leading shareholders in order to ascertain their views on the matter. The amendment, on being put to a show of hands, was lost by 10 against 3, and the original motion was carried. A further resolution approving of the other proposals was then moved by the Chairman and seconded by Mr. Wood, and after some discussion was put and agreed to. It was announced that these resolutions would be submitted for confirmation at a second extraordinary general meeting

AGUA SANTA NITRATE AND RAILWAY.—The half-yearly reports shows the net gain of £66,697 19s. 3d. for the six months ending June 30, 1896.

THE LARGEST TELESCOPIC LENS.—After two and a half-years' labour the lens for the largest and finest telescope in the world has just been completed. This lens is intended for the new observatory at Lake Geneva, and is the work of Professor Alvin Clark. Its focal distance is sixty-one feet, and the extreme diameter of the clear aperture is 41⅓ inches. The crown is about three inches thick at the middle, and one and a quarter inch thick at the outer edges, and weighs 205 lb. The flint weighs 310 lb. The lens and its iron ring and cell weigh about 1,000 lb. The cost of the glass plates in Paris was £8,000, and the *entire cost of the lens is estimated to have been* £21,000.

DECLINE IN SALT SHIPMENTS FROM THE MERSEY.

THE shipments of salt from the Mersey and England generally during the past month to the United States of America, as well as Africa and Asia, all show a substantial falling off in their October statement of loadings. Shipments of rock salt to the Continent have also been somewhat unsatisfactory. It may be, disturbing elements in the freight market and in the political world have both, in some measure, contributed to this result. The decline in the shipments to the United States is very marked, the figures being 14,735 tons, compared with 19,854 tons in October of last year. The previous shipments to the United States this year amounted to 75,[illegible] tons, against 91,557 tons in the corresponding period of last year. The October figures relating to Africa and Asia are most unsatisfactory, being 2,725 tons and 8,852 tons respectively, against 6,209 tons and 20,566 tons in October of last year. The aggregate figures of October this year for Africa only show a small decrease, but the decrease in the case of shipments to Asia is very marked, being 66[illegible] tons. A decrease is shown on the month's returns relating to the West Indies, but an increase on the earlier shipments, while considerable decreases are also reported in both cases to European ports. The export of salt to Australasia and the Pacific Islands increased in October, and also during the previous nine months, this being also the case with regard to the export of salt to other ports in the United Kingdom. A slight increase all round is also reported in the shipments to Central and South America. The total export of salt during October amounted to 47,851 tons, compared with 66,558 tons in October of last year, and 470,641 tons during the first nine months of this year, compared with 551,130 tons in the corresponding period of 1895. Of these totals the shipments from Liverpool were:—October, 1896, 39,694 tons; October, 1895, 59,792 tons; nine months, 1896, 337,860 tons; nine months, 1895, 425,572 tons; and from Runcorn and Weston—October, 1896, 8,157 tons; October, 1895, 6,766 tons; nine months, 1896, 132,781 tons; nine months, 1895, 125,558 tons.

ELECTRIC POWER FROM NIAGARA FALLS

AT one minute past midnight, on the 16th inst., the Mayor of Buffalo, U.S.A., with a distinguished company of his fellow citizens, announced the formal receipt of electric power from Niagara Falls by a salvo of 21 guns Twenty-six miles away a tiny leak from the cataract rapids, falling from water level a distance of 175 feet, enters a turbine which drives a vertical steel shaft 22in. in diameter at the base, diminishing to 15in at the bearings, at a speed of 250 revolutions per minute. At the top of this shaft revolves a dynamo developing 5,000-horse power of electrical energy in an alternating two-phase current of 2,200 volts. Three of these mighty, though almost silent generators are emitting 15,000-horse power, supplying energy to half a score of large and successful manufactories (producing aluminium, carborundum, calcium carbide, and sodium) to the city street lamps, to hotels and private houses innumerable, to the local trolley tram lines and to the trolley railroad connecting Niagara city with Buffalo. At the Niagara power-house the initial electrical energy of 2,200 volts is stepped up by transformers into 11,000 volts, at which the current passes over a pole line carrying three wires for three-phase transmission. On reaching Buffalo it is reconverted and reduced by means of stepping down transformers to an alternating current of 400 volts. It next runs through rotary transformers and becomes direct current suitable for street railway and kindred uses. The first Buffalo customer is the Buffalo street railway company, supplying street conveyance for the entire city of 375,000 souls.—*Times*.

THE SALT SUBSIDENCES COMPENSATION BOARD.—At the last meeting of the Lancashire County Council the appointment of the representatives of the Council upon the Compensation Board for the Northwich Salt Compensation district came up for consideration. Mr. Hewitt made an appeal for the exercise of special care. He remarked that the Board consisted of nine persons. Three of these were to be representative of those who claimed compensation, three were to be representative of persons who had to pay the compensation, and the three were to be representative of the Council. The three representatives of the Council would thus be in a position to hold the balance between the other two parties—those who claimed and those who paid compensation - and it was much to be desired that the gentlemen selected should be able and willing to give the necessary time to the duties of the office The following gentlemen were then nominated:—Sir Joseph Verdin, Mr. Philip Speakman, Dr. J. W. Smith, Mr. Christopher Kay, Mr. Harry Thornber, Mr. E. H. Moss, and Mr. C. H. Bowes. Sir Joseph Verdin received 44 votes, Dr. Smith, Mr. Thornber, and Mr. Speakman had each 28 votes. On a show of hands being taken Mr. Thornber and Mr Speakman were elected, along with Sir Joseph Verdin.

Correspondence.

We do not hold ourselves responsible for the opinions expressed by our correspondents.

THE PATENT OFFICE.

(*To the Editor of the Chemical Trade Journal.*)

R, - From time to time the British Patent Office comes in for a lot iticism, from writers and speakers, on account of its ways, and od deal of disparaging comparison with various foreign Patent es—notably the American Patent Office. Now it appears to me many of the persons who rush into print, or deliver a speech on abject, do so without a full knowledge of the matter, and hence a number of misstatements First, as to the validity of patents. a well-known fact that the British Patent Office does not guarantee alidity of any patent which it grants, but then, neither does any Patent Office. Many writers assume that, because the American makes a more detailed examination into the specification of a t before granting it, that such patent must be valid ; but such is ie case. We often hear of patent cases being tried in America in the validity of the patent comes into question, and after a trial, penses of which may run into thousands of pounds, the patent is ed invalid. We sometimes hear of the deluded patentee who, g an idea, secures a patent for it at the expense of £4 , often to when he comes to work it, that the thing had been patented - the Patent Office coming in for a lot of abuse for taking his y and granting him a patent. But if the thing be inquired into, robability is that the patentee does, after getting his patent, what ght to have done before, and saved his money—that is, he goes to free library, and, hunting up the Patent Office publications, finds his idea had been previously patented. Now in such a case the tee is really the blameable party. All would-be patentees should the Patent Office publications before they attempt to secure a , to see that they have not been forestalled

ne people who have looked at the great number of British patents d by German chemical works are disposed to growl at the Patent for granting them, while they say that the door is shut against sh chemists. Here again a misstatement of affairs is made. The h Patent Office is perfectly impartial in the matter, and it will as y grant a patent to the English chemist as to his German brother. cannot help the fact that the former does not bring anything for patent, while the latter does, with some pecuniary advantages to lf. Until English manufacturing chemists take a leaf out of the of their German brethren, such a state of affairs will continue to

Patent Office might improve many of its ways ; it might, for ce, reduce the fees on patents ; it might improve its publications, sue them more cheaply and quickly than it does now ; while it increase the value of the patents it grants if it would make a examination of the specifications sent to it, and call the patentee's on to any prior patent which it thinks is an anticipation of the ed patent.—I am, &c., T. G. R.

Selected Correspondence.

HE MERSEY AND IRWELL JOINT COMMITTEE.

(*To the Editor of the Manchester Guardian.*)

,—In a letter to the Mersey and Irwell Joint Committee Sir Roscoe writes as follows :—"Alderman Snape's remark at the l Town Council meeting—viz , 'that I had in a letter of advice Manchester Corporation practically said that it was impossible ply with the standard of the Joint Committee'—is altogether in-." Is it? It has been said that chemists can extract sunbeams ucumbers, and it is generally admitted that sewage-polluted can be restored almost to its pristine purity. But at what cost? in the same letter, Sir Henry says: "The debatable matter is ntirely one of cost—viz., disposal as against purification." Pre- The standard of purification demanded by the Joint Committee igh that, although Sir Henry has demonstrated that it can be d by a process of intermittent artificial filtration, the plain g of what he said to the Manchester Corporation is that it is ticable, on account of the great cost, and therefore he nends the culvert sixteen miles long. But what is Bacup to d the other towns at a greater distance from the sea than ester? Is Bacup to have a culvert thirty-six miles long? Bacup will say that both Sir Henry's schemes are im- able on account of expense. Salford, however, has decided dopting an intermittent filtration scheme, at a cost of £50,000., tion to the enormous sums already spent (£100,000.), but the Local Government Board say they know our business better than we do ourselves, and will not sanction the scheme unless we take a much larger area of land and spend a great deal more money. Is it not time that a convention of representatives of the different authorities on the water shed was held in order that a strong voice may be heard proclaiming that the Joint Committee and the Local Government Board are placing upon our shoulders a "burden too grievous to be borne?" Let us tell them that we are willing to do what is reasonable ; we will keep the sludge out of the canal, and we will pour in an effluent as clear and pure as a reasonable expense will give. But we do not mean, and it is not necessary for us, to be ruined in the attempt. Let us follow the example of the Radcliffe District Council, who got their member, Colonel Mellor, to bring their case before Parliament, which he did with such effect that the Local Government Board have abated their demands Let us call our members of Parliament together and instruct them to plead our cause with the powers in London. I hope the Manchester citizens will reject the culvert scheme. I do not see the necessity of wasting £300,000. over this foolish plan.—Yours, &c.,

JOSEPH SNAPE.

(*To the Editor of the Manchester Guardian.*)

SIR,—The letter of your correspondent "Caution" in last Saturday's issue calls for the serious attention of every Manchester ratepayer, who, with myself, will suffer if a false step is taken. I have been a member of an urban sanitary authority for twenty years, since 1870, and must express my astonishment when we are publicly told that it is impossible to conform to the standard of purity of effluent required by the Mersey and Irwell Joint Committee. Certain outside districts have already dealt successfully with their sewage, without the use of land filtration. Take, for instance, the sewage works of the Littleborough Urban Sanitary Authority. In this case the samples of effluent have often been taken and analysed by the inspectors and chemists appointed by the Mersey and Irwell Committee, and the result has been that a standard of purity has been attained far in excess of what is required. Another result of these tests has been that Littleborough has often been placed at the head of the list in Lancashire. The Littleborough authorities were compelled by the Government to buy land for filtration, but they have never used it for that purpose, and the system adopted has been precipitation, aided by a properly constructed filter bed, the latter not occupying more than one-third of the area of the tanks. Close by, in the same district, by the same means, the foulest sewage (wool scourings and dye-water) has been also successfully treated by several private firms All this can be proved by public records or by inspection, and it is amazing that the Council of a city like Manchester should accept the statement that it is impossible to deal with their sewage without purchasing large tracts of land. This land, if bought and used, would sooner or later become thoroughly poisoned and choked, and therefore useless for filtration purposes. An inquiry at the Rochdale sewage farm will prove this. It is quite possible to deal effectively with the albuminoids of ammonia and other putrescent matter by using proper precipitants – of course taking for granted that sufficient tank room has been provided to enable the flow of sewage to be held in suspension for at least five hours The neglect of the latter precaution has been the cause of failure in many of the larger towns.—Yours, etc. JAMES SCHOFIELD.

Stubley Hall, Littleborough, November 19.

ANSWERS TO CORRESPONDENTS.

J. M. AND S.—The address of the Company is Dock House, Billiter-street, E.C.

R. H. (China).—The information has been sent.

B. S.—In most cases it would apply, but it does not do so in this instance.

PHIL.—He is often defined as an individual who can mind everybody's business but his own. This may or may not be a true definition, but you must use your own judgment.

THE USE OF PETROLEUM IN MOTOR CARS.—In promulgating regulations relating to the keeping, conveyance, and use of petroleum in connection with light locomotives, the Home Secretary calls public attention to the dangers that may arise from the careless use of those more volatile descriptions of petroleum to which the rules apply, being petroleum to which the Petroleum Act, 1871, applies, and commonly known as "mineral spirit." "Not only is the vapour therefrom, which is given off at ordinary temperature, capable of being easily ignited, but also, when mixed with air, of forming an explosive mixture. Hence the necessity for strict precautions in dealing with and handling the same, and for the employment of thoroughly sound and properly closed vessels to contain the same, the importance of avoiding the use of naked lights in dangerous proximity to the same or to any place where such petroleum may be kept, and generally of taking precautions to prevent contact of the highly inflammable vapour of this very volatile liquid with any form of artificial light."

Trade Notes.

THE SEWAGE QUESTION AT WEDNESFIELD.—In consequence of the authorities at Wednesfield being pressed by the County Council of Staffordshire to deal immediately with their sewage in a manner more satisfactory than in the past, we understand that a scheme has been prepared, and the District Council are negotiating for the purchase of about ten acres of land situated at Merrilees Hole, which is to be utilised as a sewage farm.

SHORT TIME IN THE CHEMICAL TRADE.—The United Alkali Co., Ltd., have issued orders that chemical workers other than labourers in their works at St. Helens and Widnes are to be employed not more than 40 hours per week until February next, a reduction of from 16 to 20 hours per man per week. Many thousands of men are affected. The loss of wages will be severely felt in Widnes, where trade is already at a low ebb.

GOLD IN NORTH WALES.—It is reported that a discovery of gold has been made in the estuary of the River Mawddach at Barmouth, and that valuable quartz has been found in the bed rock. Applications for permission to dredge have been made to the Barmouth Harbour Trust and the Board of Trade, and the former authority has consented, provided that the navigation of the river is not interfered with. A vein of gold quartz is also said to have been discovered in the Panorama Walk at Barmouth.

THE ANGLO-SICILIAN SULPHUR SYNDICATE.—To all accounts, things are not running as well for this combination as they might do. This is the case in America especially. While the price there has been advanced until now $21. is about the price, the demand has not been active. On the contrary, increased attention has been paid to pyrites, and there is a tendency to use this product as a means of relief, whereby the arbitrary prices fixed by those controlling the Sicilian output may be avoided. The English imports of sulphur in October were 28,830 cwts., as compared with 39,663 cwts. in the same month of 1895.

THE NEW CONVEYOR CO., LTD.—It is well-known in business circles that Messrs Little and Graham, Ltd., was the offspring of the New Conveyor Co., Ltd., the proprietor of the latter company being the senior partner and founder of the former; but we are informed that the legal formalities are in progress to incorporate the successful progeny with the sedate parent, by amalgamating the two businesses, and so obtain the advantages that cannot but follow the conjoining of such cognate concerns. Mr. Gilbert Little will, as heretofore, hold the controlling interest.

WOOLWICH ARSENAL *v.* GUN MANUFACTURERS.—A pretty little question is pending between the Admiralty and the Woolwich Arsenal in connection with the mounting of the 22-ton guns in the *Terrible* and *Powerful*. When these guns were ordered the leading gun-manufacturing firms were invited to tender. They did so, but only to find that the Woolwich authorities had submitted a much lower price—namely, £17,555. The work was consequently awarded to the Government department. From a national point of view this appears most satisfactory; but it now transpires that the job has actually cost some £25,000. (very much more than was quoted by Lord Armstrong's firm or by Sir Joseph Whitworth and Co.); and the question naturally arises, Who should pay the difference between the estimates and the actual cost? Woolwich is not controlled by the Admiralty, and it seems probable that the loss must be borne out of the War Office vote.

LINLITHGOW DRAINAGE SCHEME.—The Linlithgow Police Commissioners are still much hampered in their efforts to carry through a drainage scheme for the burgh. At their last meeting a letter was read from Messrs. Tods, Murray and Jamieson, W.S., Edinburgh, enclosing a copy of the correspondence with Professor Armstrong, C.E., Edinburgh University, in which the Professor asked to be supplied with a joint-letter from the Duke of Hamilton's trustees and the burgh, authorising him to have the chemical and bacteriological analysis of the water of the Avon made, which had been spoken of in the month of August last, when the reference in connection with the drainage scheme was made to him. It was stated that the cost of such an analysis might be from 30 to 60 guineas. The remit to Professor Armstrong was with the view of ascertaining whether the establishment of sewage purification works on the banks of the river Avon and the effluent from these works would be a nuisance to the neighbouring lands of the Duke of Hamilton; and secondly, whether the discharge of the sewage of Linlithgow treated at the mouth of the Avon, whither the Commissioners proposed to carry it, would be a nuisance to the Duke's lands there. After considering the matter the Commissioners instructed their clerk to write Professor Armstrong saying they hoped he would be able to fulfil the remit made to him without the necessity of making this analysis, the cost of which they did not see their way to incur.

RIO TINTO COMPANY, LIMITED.—An extraordinary meeting of t Rio Tinto Company took place on Thursday. A resolution was una mously carried making an addition to the articles of association where shares in the Company might be divided into preference shares with fixed rate of dividend, and ordinary shares bearing dividend accordance with the profits of the Company.

A CATECHISM OF CHEMISTRY.—Under the title of "A Sh Catechism of Chemistry for Beginners," Mr. A. J. Wilcox has prepa a series of fifty progressive questions, with answers. The days booklets of this class were long since numbered, but this partic example must not be judged too harshly. It is well arranged, printed in types that show care in the selection. Though by no me devoid of loose definitions, still, considering its very elementary so it possesses certain points which are novel and commendable. Th are a great many teachers of elementary chemistry who could lear "wrinkle" or two from its pages, and, as the cost is only 8d., th would be little risk in the experiment.

A DRYSALTER'S FAILURE.—The public examination of Mr. Edw Eaton, of 8, Newhall-street, and Fountain-street East, Macclesfi drysalter and chemical manufacturer, took place recently at Macclesf Bankruptcy Court. The gross liabilities amounted to £1,800. 8s. and the assets were estimated to produce £2,797. 18s. 3d. F questions put by the Official Receiver (Mr. N. C. Proctor) it appe that the debtor commenced business as a drysalter and chemical ma facturer about 45 years since at Fountain-street East, with a capita £1,800. He had also been in business in Manchester about 40 ye and from about 1885 to 1892 he was in partnership with Mr. W. Hordern, trading under the name of Eaton and Hordern as drysalter 41, Corporation-street, Manchester. Mr. Horden, who put £1,0 into the Manchester business (bankrupt having £500 in it), had interest in the Macclesfield business. The Manchester business dissolved by mutual consent in 1892, when Mr. Hordern took over business and the assets and liabilities and gave the debtor promiss notes for £500, all of which had since been paid off. He had sold policy of insurance for £3,000., on which he had paid £40. a year 40 years, for £800. Questioned as to certain "enterprises," bankr said he had lost £20,000. worth of shares in the Hindostan Bank; also had £5,000. worth of shares in the London, Chatham, and Do Railway, but owing to Morton Peto coming to grief he lost these al During the last 15 years he had been trying to get out of his busine The committee allowed him £2. a week for looking after his busine but he had not been paid, although he had applied. The Offic Receiver said the bankrupt's statement showed a surplus at present, b if the statement showed a deficiency he should reserve the right to a for a deficiency account. Mr. Ibeson (trustee): If there is a deficien to account for it will be loss on the sale of the premises. The examin tion was closed.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are quiet, there being little doing, though prices are a sha weaker for 90's at 4s. 3d., and 50/90's at 3s. Carbolic acids are fir and apparently in short supply—crude, 60%, still stands at 2s., n 40% crystals at 7½d. Crude naphtha is about the same, nearest val being 1s. 3d.; solvent is dearer, quotation now being 1s 7d. Cresso and anthracene steady. Pitch continues disappointing at 28s. to 30 f.o.b. East Coast.

Sulphate of ammonia is in a position which is not exactly re-assuri The spurt has been the veriest of sprints. The most pressing requi ments of purchasers having been filled, the demand has begun to fl again. Closing prices are:—London outside makes £7. 17s. 6d. £8, Liverpool £7. 17s. 6d., Hull £7. 16s. 3d. to £7. 17s. 6d., a Leith £7. 12s. 6d. to £7. 15s., all prompt.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade values remain fairly firm all round, and there considerable demand for bleaching powder from the United Stat Caustic soda is also moving more freely, but in this article the pric both for prompt and forward remain as for some time past, and sp prices may be taken as follows—f.o b. Liverpool, 77%, £9: 74%, £8 70%, £7. 2s. 6d.; 60%, £6. 2s. 6d. per ton, 10-ton lots and upward Bleaching powder firm at £6. 12s. 6d., f.o.r., and £6. 12s. 6d. £6. 15s. for hardwoods, f.o b. A large amount of business has be done over all 1897 in caustic soda and bleaching powder. Alka (58%) is slow to move, and price remains at £3. 7s. 6d., bags, f.o.

export there is still a greatly diminished quantity required. on of the general shrinkage of demand for alkali, the leading are resorting to short time at the works. Chlorate of soda at 5d, and chlorate of potash, 4d per lb. Bicarbonate un- l at £6. 10s., f.o b. Sulphur firm at convention rates. For caustic and carbonate, the prices have slightly advanced in t week in ordinary kinds, but some of the newer products trolysis are now coming forward in larger quantity, and ively lower prices: Carbonate, 90/92%, £17. 15s. to £18., austic potash, 90%, £24. 10s., c i.f. For brown acetate of re is an improved inquiry, and higher price is obtainable for elivery. Grey acetate quiet. Other acetates unchanged. acid has a slightly higher tendency. Yellow prussiate of ather lower, at 5½d. to 5⅝d. Soda, 4½d. per lb. For owdered arsenic there is considerable inquiry, and heavy ave been placed at advanced prices, nearest spot value being r ton, f.o.r. Garston, London. Aniline oil and salt are un- l in position, and scarcity of supplies keeps value firm. ly, the demand for chemicals remains quiet both for home trade ort.

THE METAL MARKETS.

DON, WEDNESDAY.—Pig iron, lower: Scotch warrants closed 9d., Middlesbrough 40s. 9d. cash, and hematite 50s. 8½d. easier: Chili bars, G. O. B.'s and G. M. B's., closed at . 9d. to £49. 13s. 9d. cash, and £50. 1s. 3d. to £50. 6s. 3d. nonths. Tin, quiet: Straits closed at £58. 10s. to £59. nd £59. 8s. 9d. to £59. 18s. 9d. three months; Australian, ; English ingots, £63. to £63. 10s. Lead: Spanish, £11. ; English, £11. 15s. Silesian spelter, ordinary, £18. 2s. 6d. 1s. 2½d. Antimony £29. 10s. to £30. Quicksilver: First £6. 12s. 6d.; second hands, £6. 11s. 6d. *Copper shares*, Cape, 2 7/16 to 2 7/16; Copiapo, 2 1/16 to 2 1/16; Libiola, 1 15/16 to 2 1/16; and Barry, 3 to 3¼; Rio Tinto, 25¼ to 25⅜; Tharsis, 5⅞

SGOW, WEDNESDAY.—Market easier, with a fair business. done at 48s. 10d., 48s. 10½d., 48s. 9d., and 48s. 9½d. cash; 49s. 2d. and 49s. 0½d. one month; buyers, 48s. 9d. cash. nd done at 49s. 0½d. and 40s. 9d. cash; also at 41s. and d. one month; buyers, 40s. 9d. cash. Cumberland hematite 50s. 11½d. and 50s. 9d. cash; also at 51s. 2d. and 51s. 0½d. nth; buyers, 50s. 8½d. cash. Middlesbrough hematite done 1½d. one month; buyers, 48s 9½d. cash.

REPORT ON MANURE MATERIAL.

e continues to be a fair amount of inquiry, but business does ve freely, and actual business has been only on a moderate The quotations for mineral phosphates are unchanged, but manufacturers being fairly supplied for the coming season, are lined to buy for shipment further ahead unless at some con- upon quotations. There is good demand for River Plate bones, the scarcity of cargoes no further transactions are reported. are buyers at £3. 17s. 6d. per ton both for the United Kingdom Continent. Further sales of Bombay bone meal are reported ment at £3 18s. 9d. per ton ex quay Liverpool. Crushed hee bones are held for £4. per ton, for shipment. Nitrate of n spot is firmly held for 8s. per cwt., fine quality. Due are, however, somewhat easier, and 7s. 9d. per cwt. is now full

IVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

S.—Palm oil is quite neglected, and there is nothing doing or prompt or to arrive. Olive is firm, and holders are doing ell in certain qualities, such as Malaga and Seville. Prices steady. There is no change in linseed, Liverpool makes, in casks, being steady at 17s. 3d. to 18s. 6d. per cwt., according ty. Cottonseed is lower again, though the market is perhaps rather at the decline; Liverpool refined is quoted 16s. 6d. to 17s, nerican 18s. per cwt. Castor keeps as firm as ever, and there is, eless, a better inquiry for Madras at even 3⅝d.; holders still 3¾d. for good seconds Calcutta, and 3⅝d. to 3¾d. per lb. pressure French. Tallow is unchanged. Resin in quiet and ue really nominal. Spirits of turpentine are the turn lower, on now being 21s. 6d., and with only a quiet business doing at Petroleum is steady at 6⅜d. to 7¾d. for American, and 5¾d. d. per gallon for Russian refined.

COLOURS.—Prices are steady, and practically without change, Ochres: Oxfordshire, common, £10., medium, £12., best, £15. Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Matters are, perhaps, the least shade improved so far as the general market is concerned, and there is certainly a rather more active inquiry after supplies on the forward basis. Prices, however, are not as yet very perceptibly affected except in isolated cases. Alkalis are a little firmer, and sulphate of copper has again gone up a further step. Sulphur is well held at late values. With regard to sulphate of ammonia there is still up to the present the manifestation of an improving condition of things, though the momentum in the bettering direction is of no more than moderate force. The market has got over its excitement, and the gradual rise is accepted. Prompt Leith to-day ranges between £7. 17s. 6d., and £8, while for spring delivery £8. 10s. is about the figure. Lubricating oils continue well called for, and firm of value at late figures. The other lines of the paraffin section remain less satisfactory.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. 2s. 6d. to £4. 17s. 6d. nett, Tyne; white alkali, 48/52°, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 5s., 60/62° £6. 5s., and cream 60/62° £6., all nett, Liverpool; bleaching powder, £6. 12s. 6d. nett, Tyne; saltcake, 20s.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 3d.; sulphate of ammonia, £7. 17s. 6d. to £8. prompt, f.o.b. Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £16. 15s. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1⅞d. per lb.; paraffin wax, 120° semi-refined, 1 15/16d. to 2½d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. Week's imports of sugar at Greenock were nil.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Prices continue easier, and imports have been well maintained, in fact the shipping trade for some weeks has been greatly congested here owing to the difficulty of dealing with excessive imports. The principal imports into Hull during the year have been:—Linseed, 750,112 quarters, against 592,319 quarters during same time a year ago; cottonseed, 145,320 tons, against 157,447 tons; rapeseed, 75,296 quarters, against 128,846 quarters; olive oil, 15 612 tons, against 11,406 tons; rape oil, 4,239 casks, against 7,128 casks; oilcake, 11,118 tons, against 14,523 tons; tallow, 66,429 cwts., against 12,487 cwts.; bones and ash, 5,101 tons, against 3,598 tons; turpentine, 15,459 barrels, against 18,000 barrels. Linseed oil has been again flat, and value on the spot has declined further 5s. to 7s. 6d. per ton, closing at 14s. 9d. to 15s., and very firm thereat; November-December, 15s.; January-April, 15s. 9d.; and May-August, 16s. 3d. Boiled and refined, from £1. to £2. per ton extra Export for the week has been 2,220 cwts. Refined cotton oil also about 5s. per ton lower; spot, 14s 3d. naked; December-April, 14s. 6d. Casks, £1., and ordinary barrels 30s. per ton extra; export, 2,600 cwts. First pressure castor oil firm at 3½d. per lb. Olive oil unchanged. Cod oils, £16 to £18. per ton. Turpentine unchanged. Bone grease, £16. 15s. per ton. Oleines, 94% to 97% fatty acids: White, £19.; pale, £17. 15s.; brown, £16 15s. c i.f. Hull. Olive oil soap (Italian), 60% fatty acids, £16. 15s. per ton, c.i.f. Hull. Yorkshire grease, £8. per ton, f.o.b. Hull.

CAKES.—Linseed cakes quiet; 95% pure, £6. 7s. 6d. to £6. 10s. generally, but resales offered at less. Cotton cakes: Steady spot, with however a small demand at the late advance. Damaged barley, which the English farmer is now beginning to offer, and maize being both easier to buy, operates against cakes. Best makes, £4. 10s.; seconds, £4. 7s. 6d.; Dec.-April, £4. Rape cakes unchanged.

PAINTS.—The situation and prices unchanged.

TYNE CHEMICAL REPORT.

TUESDAY.

In chemicals the market is very dull, and, as is usual at this time of the year, shipments are falling off. Soda crystals are £2. 2s 6 l. per ton, gross weight, locally. Caustic soda, 70%, £7. 5s. to £7. 10s; 76/77%, £9. to £9. 5s. per ton. Sulphur still scarce, at £4. 15s. to £5. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £4. 15s. to £5. per ton, nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—The South Durham salt trade is firm at 9s. per ton, f.o.b Tees.

COALS.—There is very little change in the market. Durham coals are firmer generally, and considerable business has taken place for forward delivery at current prices, and, in some instances, at a slight advance. Coke is very steady, and price is fully maintained. Prices: Best Northumbrian steam, 7s. 3d. to 7s. 9d. per ton; second qualities, 6s. 3d. to 6s. 9d. per ton; small steam, 3s. 9d. to 4s. per ton. Bunker coals, 6s. 6d. to 7s. Gas coals, 6s. 9d. to 7s. per ton. Household coals, 10s. to 11s. per ton. Coke, 14s to 15s. per ton.

New Companies.

J. and J. Cunningham, Ltd.—CAPITAL £240,000, in shares of £10 each. This company has been formed to carry on the business of manufacturers of chemical products and dealers in sheep dip, glue, starch, and soap. The subscribers to the memorandum of associa are:—A. Usher, Northfield, Blackford Park, Edinburgh, distiller Cunningham, Leith, merchant; A. P. Cross, Leith, merchant; Cunningham, Leith, merchant; R. Cross, Leith, merchant; W. B 9, Ettrick-road, Edinburgh, Bachelor of Law; G. Anderson, 7, warth-crescent, Edinburgh, C.A.

Frommer and Co., Ltd.—CAPITAL £10,000., in shares of each. This company has been formed to adopt an agreement wit Frommer, and to trade as chemical manufacturers, oil refiners, mineral workers, etc. The subscribers to the memorandum of ass tion are:—J. K. Donoghue, Penshurst, Merton Park, Wimble gentleman; W. K. Lemon, 1, Vanbrugh-terrace, Blackheath, ge man; R. McCue, 6L, Peabody Buildings, Orchard-street, S clerk; E Ward, 4, Battersea Park-road, S.W., clerk; E. Morr Royal Exchange-buildings, E.C., clerk; M Sheffield, 121, Henry's-road, N W, clerk; G. E D. Scott, British Museum, W clerk.

London Carbonic Acid Gas Co., Ltd.—CAPITAL £60,000 shares of £1. each. This company has been formed to acquir process of H. Steinem, for the manufacture of liquid carbonic acid and to trade as manufacturers and dealers in carbonic acid gas, cylinders, chemicals, etc. The subscribers to the memorandu association are:—C. G Elers, 87, Wandsworth-road, S.W., ma R. F. White, 23, Peckham-road, S E., manufacturer; W. S Schuster, 6, Curzon street, W., gentleman; C. J. Dale, New-s St. Pancras Station, N.W., merchant; F. M. Bentley, Atlas Mi Waters Co., Limited, Dalston, director; W. A. Jones, 14, Dartm Park-avenue, N.E., manufacturer; H. Steinem, 9, Thistlethwaite-r Clapton, N.E., merchant.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

M. LANDAU and W. CLEMENCE, under the style of Wilkins, Campbell, and York-street, King's-road, N., late Bermondsey Wall, S.E., manufact chemists and drysalters.

F. BARNES and T. C. B. LING, commercial manufacturing chemists, Hatcham S.E., under the style of the Imperial Steam Users' Association.

BANKRUPTCY ACTS, 1883 and 1890.

Receiving Order.

NAYLOR, SMITH, AND CO., Liverpool, manufacturing chemists.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 7th.

Acetate of Lime—
U. States, 1,417 bgs. H. Wallace & Co.

Acetic Acid—
Holland, 68 pks. Little & Johnston
" 178 A. & M. Zimmermann

Acetone—
Holland, 20 drs. T. H. Lee

Albumen—
France, £8 Mory & Co.

Alum—
Holland, 12 pks. W. Burton & Sons
" 64 R. W. Greeff & Co.
" 242 Ohlemschlager Brs.

Anthracene—
Holland, 44 cks. Burt, Boulton & Co.

Antimony Ore—
Portugal, 30 t. J. Bamber
" 1 Cove ley & Westray

Asbestos—
Germany, £30 T. H. Lee
Italy, 247 W. Byford
" 98 Bender & Marting
Holland, 9 W. H. Carey & Sons
" 11 J. French & Co.
Germany, 560 Deering & Robottom

Barytes—
Belgium, 28 brls. A. Zumbeck & Co.
Holland, 132 cks. W. Harrison & Co.
Belgium, 271 J. L. Lyon & Co.
" 170 pks. Burrell & Co.

Bleaching Powder—
Holland, 13 cks. J. M. Steel & Co.

Bleaching Soda—
Germany, 71 c. H. Lambert

Bromide of Iron—
Germany, 10 cks. A. & M. Zimmermann

Camphor—
Germany, 95 cs. S. Figgis & Co.
France, 5 brls. Union L. Co.
Hong Kong, 103 Eastwood & Holt

Caoutchouc—
Aden, 12 c. L. & I. D. Jt. Co.
Madagascar, 50 S. Figgis & Co.
Germany, 97 Wallace Brs.
" 64 Anderson, Weber & Co.
" 40 Prop. Bull Wf.
" 55 Forbes, Forbes & Co.
" 248 Clarke & Smith
Aden, 35 S. Figgis & Co.
Natal, 16 Hale & Son
Zanzibar, 15 L. & I. D. Jt. Co.
Madagascar, 88 Procter Brs.
Germany, 48 Major & Field
Aden, 50 Wallace Brs.
Natal, 21 L. & I. D. Jt. Co.
Singapore, 25 Elkan & Co.
" 249 L. & I. D. Jt. Co.
Aden, 18 Major & Field
" 15 Gray, Dawes & Co.
Belgium, 6 J. Harrison
Germany, 67 Lewis & Peat

Carbolic Acid—
Germany, 38 pks. J. G. Back

Castor Oil—
Italy, 10 cs. Clark, Gray & Co.
France, 30 brls. Beresford & Co.
" 87 R. G. Hall & Co
" 50 Snowdon, Sons & Co.
" 133 Lucas & Spencer's Wf., Ld.
" 167 pks. C. Windschengl & Co.
Belgium, 47 R. G. Hall & Co.
France, 109 pks. J. Greig
" 20 Anderson, Weber & Co.

Caustic Potash—
Germany, 60 c. J. M. Steel & Co.

Chemicals (*otherwise undescribed*)
France, £23 J. Harrison
" 29 Mory & Co.
U. States, 2,770 L. & I. D. Jt. Co.
Germany, 364 T. H. Lee
U. States, 810 F. Parker
Belgium, 19 O. Scholzig
Holland, 389 T. L. Lee
" 100 G. Rahn & Co.
Germany, 30 R. W. Harris
" 15 Phillipps & Graves
Belgium, 182 Société John Cockerill
Germany, 14 H. Lambert
Holland, 32 H. Lorenz
Germany, 55 Craven & Co.
" 61 L. & I. D. Jt. Co.
" 1,367 A. & M. Zimmermann

Cream of Tartar—
Spain, 2 pks. Mauri Brs.
France, 17 cks. B. & F. Wf. Co.
" 5 C. F. Gerhardt
" 4 McNamara & Co.

Dextrine—
Germany, 30 bgs. M. D. Co.
" 50 H. Lorenz
" 50 Pronk, Davis & Co

Dyestuffs—
Cochineal
Canaries, 4 bgs. Kahner, Hamm & C
" 6 Swanston & C
" 12 Knowles & Fo
" 8 W. M. Smith & S
" 9 Sperling & Wilk
Cutch
Ceylon, 120 cs. Cay Irvine & C
Extracts
U. States, 37 cks. Rosen Lowe & C
France, 50 B. & F. Wf. C
Denmark, 11 pks. Sou ten & C
France, 3 T. H. L
Denmark, 2 M. D. C
Divi Divi
Ceylon, 19 bgs. Forbes, Forbes & C
Gambier
Singapore, 5,598 blc. Adamson, Gill & C
" 251 L. & I. D. Jt. C
" 648 bgs. Beresford & C
" 56 G. R. Hal
Indigo
E. Indies, 7 chts. Eales, Prince & C
" 8 H. W. Jewsbu & C
" 20 Binny & C
" 3 Arbuth
Latham & C
Logwood
B. W. I., 1 L. Fay, Mag & C
Myrabolams
E. Indies, 1,366 bgs. W. Shak
Orchella
Ceylon, 4 blc. L. & I. D. Jt. C
" 4 Prop. Hall's W

Tanners' Bark
Natal, 50 t Boutcher, Mortimore & Co

Valonia
A. Turkey, 88 t W. W. Mitchell
" 6 M. D. Co.

Farina—
Germany, 50 bgs M. D. Co.
" 50 sks. Hernu, Peron & Co
Holland, 350 bgs. J. Barber & Co.
" 120 J. Knill & Co.
" 200 G. Hornzee

Gamboge—
China, 14 cs. S. Figgis & Co.
" 27 L. & I. D. Jt. Co.
Singapore, 19 "

Glucose—
Germany, 25 pks 203 c. Bennett S. S. Co.
U. States, 750 750 L. Norman & Co.
" 2,000 2,000 Pearce, Pelly & Co.
" 200 1,100 T. M. Duche & Sons
" 499 999 E. Thompson & Co
Germany, 200 200 Frank & Ohlmann
" 1 5 Stein Brs.
U. States, 50 300 Union Ltge. Co.
" 25 150 Bellamy & Co.
Germany, 31 35 Spies Brs. & Co.
" 13 105 M. D. Co.
U. States 350 600 R. G. Hall & Co.

Glue—
Holland, £22 Carey & Sons
Austria, 250 M. H. Voss
France, 665 Burnett Brs. & Sons
Belgium, 34 Sawer, Sons & Co.
" 260 J. Barber & Co.
Norway 5 G. D. Jennings & Co.
Germany, 32 M. D. Co.
" 66 J. Barber & Co
" 90 Steinhoff, Sons & Co.
" 75 L. & I. D. Jt. Co.
" 25 T. H. Lee
Holland, 20 G. Rahn & Co.
Germany, 60 Phillipps & Graves

Infusorial Earth—
Germany, £35 T. H. Lee

Lactic Acid—
U. States, 25 pks. Wilsons & Furness Co.

Lamp Black—
U. States, 150 brls. M. Ashby, Ltd.
" 70 hds. J. Melvin

Lead Acetate—
Germany, 10 cks R. W. Greeff & Co.
" 15 Beresford & Co.

Lead Oxalate—
Holland, 10 cks R. W. Greeff & Co.

Litharge—
Holland, 39 cks. Spies Brs. & Co.

Manganese—
Germany, 10 c. Taylor Bros.

Manure—
Germany, 51 t. Perkins & Homer
" 5 H. Bertram & Co.

Methyl Alcohol—
U. States, 60 brls. Stein Brs.
" 200 J. Whalley

Mica—
E. Indies, £100 D. Grey & Son
" 3,085 W. M. Smith & Sons
" 715 E. Davis & Co.

Molasses—
U. States, 64 cks. 300 c. Robinson, Son, & Co.
Germany, 25 150 R. G. Hall & Co.
" 29 66 Craven & Co.

Naphtha—
Holland, 36 brls. Burt, Boulton, & Co.

Ochre—
France, 27 brls. Hemingway & Co.
" 8 cks. O'Hara & Hoar
" 21 Burnett Brs. & Sons
Italy, 12 D. Storer & Sons
Holland, 3 pks. Phillipps & Graves

Paint—
Germany, 1 cs. T. H. Lee

Phosphate Rock—
Belgium, 230 t. Odams Manure & Chemical Co.
France, 150 A. Hunter & Co.

Pitch—
N. Russia, 25 pks. M. D. Co.
" 350 brls. Fellows, Morton, & Co.

Plumbago—
R. de Janeiro, 17 cks. Paul Hecker & Co.
Ceylon, 130 J. Forsey
U. States, 1,458 R. J. Hewetson
Germany, 12 Brown & Elmslie
Ceylon, 85 Doulton & Co.
" 137 R. G. Hall & Co

Potash—
Germany, 140 c. A. J. Luke & Co.

Potassium Carbonate—
France, 90 c. J. A. Reid
" 51 A. Zumbeck & Co.
Belgium, 100 Petri Brs.
Germany, 100 R. W. Greeff & Co.

Potassium Cyanide—
Holland, 45 cs P. Heydemann
" 6 F. Boehm

Potassium Sulphate—
Germany, 40 bgs. F. W. Berk & Co.
" 508 Bessler, Waechter, & Co.

Rosin—
U. States, 5 brls. Soundy & Sons
Germany, 156 F. & S. Chiesman & Co.

Rosin Oil—
Germany 4 brls. H. Hunt

Saltpetre—
Germany, 90 cks. L. & I. D. Jt. Co
" 168 P. Hecker & Co.
" 70 S. E. Railway

Soda—
Holland, 140 c. R. W. Greeff & Co.
France, 141 Burnett Brs. & Sons

Sodium Acetate—
France, 15 cks. H. Lorenz
" 29 J. Harrison

Sodium Sulphate—
Italy, 10 cks. Beresford & Co.

Starch—
Holland, 10 cs. T. H. Lee
U. States, 300 bgs. R. Warner & Co.
Germany, 80 Phillipps & Graves
Holland, 1,420 Little & Johnston
U. States, 250 sks R. Bennett & Co.
Belgium, 170 cs. Leach & Co.
Germany, 30 10 bgs Seaward Brs.
" 1,480 Horne & Co.
Holland, 240 Phillipps & Graves
Belgium, 718 F. Claydon & Co.
France, 400 B. & F. Wf. Co.
Belgium, 100 J. Harrison
Holland, 160 G. Rahn & Co.

Stearine—
France, 240 bgs. H. Hill & Sons
U. States, 15 cks. Biglands
N. Zealand, 1 Davies, Turner, & Co.
Holland, 3 J. Owen
" 16 H. Hill & Sons
France, 100 bgs. Bennett S. S. Co.
" 20 T. H. Lee

Tar—
N. Russia, 1,155 brls. Linck, Moeller, & Co.
" 250 Hoare, Marr, & Co.

Tartaric Acid—
Belgium, 4 pks. B. & F. Wf. Co.
Holland, 10 cks. "

Ultramarine—
Holland, 3 cs. Hernu, Peron, & Co.
" 29 pks. Phillipps & Graves
Germany, 14 Steinhoff, Sons, & Co.
Belgium, 13 W. Harrison & Co.
" 20 cs. A. B. Curtis & Co.
" 12 brls. D. Storer & Sons
Holland, 10 cs. J. Barber & Co.

Varnish—
Belgium, 5 pks. Stobbs, Wilson, & Co

Verdigris—
France, 2 cks. B. & F. Wf. Co.

White Lead—
Belgium, 24 brls. Burrell & Co.
Holland, 20 cks. Blundell, Spence, & Co.
" 40 Taylor Brs. & Co.
Germany, 2 Kirkpatrick, Barr, & Co.
Belgium, 20 Perkins & Homer
Germany, 27 W. A. Rose & Co.
" 19 Randall Bros.
Belgium, 24 J. L. Lyon & Co.
France, 37 J. Watt & Son
" 7 A. Zumbeck & Co.
" 18 J. L. Lyon & Co.
Germany, 26 brls. H. B. Alder & Co.

Wood Pulp—
Norway, 1,495 pks. E. J. & W. Goldsmith
Sweden, 297 W. G. Taylor & Co.
Norway, 80 "
" 334 W. E. Bott & Co.
Sweden, 40 W. D. Cork
Norway, 1,525 Tough & Henderson
Germany, 66 G. S. N. Co.
Holland, 26 W. Friedlaender
Belgium, 2,320 E. J. & W. Goldsmith

Zinc Oxide—
Germany, 100 brls. D. Storer & Sons
Holland, 502 cks. Soundy & Sons
U. States, 70 brls. M. Ashby, Ltd.
Germany, 50 "

Zinc White—
Holland, 105 cks. Spies Brs. & Co.

LIVERPOOL.

Week ending November 5th.

Asbestos—
Quebec, 800 bgs.

Barytes—
Antwerp, 52 cks. 101 bgs.

Borax—
Mollendo, 400 sks. A. S. Henry & Co.
Valparaiso, 2,346

Castor Oil—
Calcutta, 1,000 cs. Ralli Brs.

Colours—
Hamburg, 1 cs.

Cottonseed Oil—
New York, 100 brls.

Cream of Tartar—
Barcelona, 5 cks Sachse & Klemm

Dried Blood—
M. Video, 745 bgs.

Dyestuffs—
Algarrobilla
Coquimbo, 44 sks. Schintz & Co.
Argols
Oporto, 46 cks. German Bank of London
Cutch
Rangoon, 800 bxs.
Divi Divi
Hamburg, 1 bx.
Extracts
New York, 50 bxs. W. Bingham
" 16 cks.
Logwood
Havre, 1 pcl. Roberts, Evans & Co.
Orchella
Coquimbo, 2 bls. Schintz & Co
Valparaiso, 9
Valonia
Syra, 333 bgs. L. J. Veizunaras
" 350

Farina—
Fiume, 35 bgs.

Glucose—
New York, 350 brls. T. M. Duche & Sons
" 350

Glue—
St. Nazaire, 34 cks. 10 cs.
Rotterdam, 210 bgs.

Infusorial Earth—
Hamburg, 45 bgs.

Limestone—
Antwerp, 1 crt. 2 cs. J. T. Fletcher & Co.
" 2

Magnesite—
Kimassi, 700 t. Tennants & Co.

Magnesium Sulphate—
San Francisco, 30 brls. M'Farlane M'Crindall

Manganese Ore—
Coquimbo, 1,033 t.
Vizagapatam, 993 Darwen & Mostyn Iron Co.
Lisbon, 930 "

Mercuric Oxide—
Hamburg, 4 cks.

Mineral White—
Fiume, 100 bgs. A. Boumann & Co.
" 100

Molasses—
Montreal, 2 cs. M. Greenshields

Ochre—
Alicante, 35 brls.

Paint—
Boston, 15 cs. Frazer & Co.
" 20 Leech & Co.

Paraffin Scale—
New York, 695 brls. Thompson & Bedford
" 500 Anglo-Am. Oil Co., Ld.

Potash—
Antwerp, 4 dms.
Montreal, 50 brls.

Pumice Stone—
Leghorn, 50 cks.

Starch—
Antwerp, 80 cs J. T. Fletcher & Co.
" 160
New York. 800 sks.

Stearine—
Antwerp, 13 bgs. J. T. Fletcher & Co.

Tallow—
San Francisco, 1,000 brls.
Boston, 100 Colby & Co.
" 150 200 tcs. 60 hds.
New York, 375 Colby & Co.
" 180
" 500 hds. H. D. Vandenhove & Co.

Tartar—
Bordeaux, 31 cks.

Treacle—
Bordeaux, 3 cs.

Varnish—
New York, 5 brls. 1 bx. W. A. Warren

Verdigris—
Bordeaux, 4 cks.

Wood Pulp—
Gothenburg, 130 tls. G. F. Greef & Co.
" 6 R. L. Lundgren
Oporto, 500

Zinc White—
Hamburg, 40 cks.

MANCHESTER.

Week ending November 7th.

Acetic Acid—
Rotterdam, 17 brls.
Antwerp, 1 ck.

Alumina—
Rotterdam, 21 cks.

Alumina Sulphate—
Rotterdam, 17 cks.

Ammonium Acetate—
Rotterdam, 2 brls.

Aniline Colours—
Rotterdam, 26 brls. 7 bxs.

Asbestos—
Rouen, 1 cs. 1 pk.

Barium Chlorate—
Hamburg, 22 cks.

Barytes—
Rotterdam, 200 bgs.
Antwerp, 60

Chemicals *(otherwise undescribed)*
Rotterdam, 17 cks.
Rouen, 32

Colours—
Boulogne, 5 cks.
Rotterdam, 9 28 cs. 25 bxs. 127 brls.
Antwerp, 8 6

Cottonseed Oil—
Rotterdam, 150 brls.

Dyestuffs—
Alizarine
Rotterdam, 62 brls.
Logwood
Progresso, Yucatan, 500 t.

Farina—
Stettin, 2,200 bgs. Brown, Geveke, & Co.
" 615
Rotterdam, 200
Hamburg, 492

Glue—
Hamburg, 100 bls.
Boulogne, 1 ck.
Rotterdam, 5 49 cs. 220 bgs.
Rouen, 70 16 bls.
Antwerp, 4 10

Limestone—
Antwerp, 1 crte. J. T. Fletcher & Co.
" 2 4 cs.

Litharge—
Rotterdam, 6 cks.

Potassium Prussiate—
Rotterdam, 5 cks.
Sodium Acetate—
Rouen, 56 cks.
Sodium Nitrate—
Rotterdam, 8 cks.
Starch—
Hamburg, 20 cks.
Rotterdam, 30 cs.
Ghent, 160
Tar Waste—
Rotterdam. 18 cks.
Tartaric Acid—
Rotterdam, 15 cks.
White Lead—
Antwerp, 6 cks.
Wood Pulp—
Copenhagen, 301 bls.
Zinc Ashes—
Stettin, 20 cks.
Antwerp, 14 brls.
Zinc Oxide—
Hamburg, 15 cks.
Zinc Sulphate—
Rotterdam, 2 brls.

HULL.

Week ending November 7th.

Acetic Acid—
Rotterdam, 42 blns. Hutchinson & Son
Arsenic—
Hamburg, 119 cks. Wilson, Sons, & Co., Ld.
Barytes—
Amsterdam, 14 cks. W. & C. L. Ringrose
75 bgs. Ringrose
Antwerp, 35 cks. H. F. Pudsey
Bremen, 37 G. Holmes & Co.
Rotterdam, 22 Hutchinson & Son
Antwerp 200 bgs.
Chemicals *(otherwise undescribed)*
Bremen, 1 cs. Veltmann & Co.
Hamburg, 27 cks. Wilson, Sons, & Co., Ld.
Antwerp, 20 pks. ,,
Cod Oil—
Christiania, 5 brls. Wilson, Sons, & Co., Ld.
Drontheim, 5 ,,
Aalesund, 143 ,,
Colours—
Rotterdam, 6 cks. Hutchinson & Son
Antwerp, 1 cs. Storry, Witty, & Co.
,, 3 cks. Storry, Smithson, & Co.
,, 15 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 93 14 W. & C. L.
47 brls. 5 bxs. Ringrose
,, 5 Wilson, Sons, & Co., Ld.
Ghent, 90 Hutchinson & Son
Cryolite—
Copenhagen, 6 cks. Wilson, Sons, & Co., Ld.
Dextrine—
Stettin, 150 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 14 cks. W. & C. L.
15 brls. Ringrose
Tanners' Bark
Ghent, 141 bgs. Hutchinson & Son
Farina—
Harlingen, 200 bgs. W. & C. L. Ringrose
Stettin, 91 Wilson, Sons, & Co., Ld.
Glucose—
New York, 249 bgs. 500 brls.
Glue—
Rouen, 14 cks. Rawson & Robinson
30 bls.
Antwerp, 5 pks. Bailey & Leetham
Bremen, 30 bgs. Veltmann & Co.
Kaolin—
Rotterdam, 236 bgs. Hutchinson & Son
Lead Acetate—
Hamburg, 1,336 bgs.
Paint—
Bergen, 1 cs. Wilson, Sons, & Co., Ld.
Pitch—
Rotterdam, 2 cks. W. & C. L. Ringrose
Amsterdam, 24 cs. Hutchinson & Son
Potash—
Dunkirk, 47 cks. Wilson,
76 dms. Sons, & Co., Ld.
Pumice Stone—
Rotterdam, 2 cks. Hutchinson
1 cs. & Son
Quicksilver—
Hamburg, 5 jars Wilson, Sons, & Co., Ld.
Saltpetre—
Rotterdam, 6 cks. Hutchinson & Son
Starch—
Amsterdam, 10 cs. Hutchinson & Sen
Antwerp, 48 pks. Bailey & Leetham
Bremen, 1,972 cs. Veltmann & Co.
Antwerp, 80 Wilson, Sons, & Co., Ld.
Ghent, 561 Hutchinson & Son
Stearine—
Antwerp, 13 bgs. Bailey & Leetham
Tallow—
New York, 250 brls. Wilson, Sons, & Co., Ld.
Tartaric Acid—
Rotterdam, 4 cks. Hutchinson & Son
Turpentine—
Libau, 106 brls.
Ultramarine—
Harlingen, 2 cs. W. & C. L. Ringrose
Bremen, 4 cks.
Rotterdam, 1 W. & C. L. Ringrose
Waste Salt—
Hamburg, 20 bgs.
White Lead—
Amsterdam, 26 cks. W. & C. L. Ringrose
Rotterdam, 154 Hutchinson & Son
,, 30 W. & C. L. Ringrose
Ghent, 4 Hutchinson & Son
Wood Pulp—
Christiania, 520 bls. Wilson, Sons, & Co., Ld.
Gothenburg, 1,534 ,,
Drontheim, 1,120 ,,
Bergen, 356 ,,
Hamburg, 145 ,,
Helsingfors, 383 J. Good & Sons
New York, 213 pks. Wilson, Sons, & Co., Ld
Zinc Oxide—
Antwerp, 50 cks. Bailey & Leetham

GLASGOW.

Week ending November 12th.

Acetic Acid—
Rotterdam, 10 blns. 7 cks. J. Rankine & Son
Albumen—
Ghent, 10 cs.
Alkali—
Rotterdam, 44 cks. J. Rankine & Son
Alumina Sulphate—
Antwerp, 40 cks. 150 bgs.
Aniline—
Rotterdam, 38 cks. 15 cs. J. Rankine & Son
Hamburg, 7 1
Arachide Oil—
Rotterdam, 4 cks. J. Rankine & Son
Barium Sulphate—
Antwerp, 100 bgs.
Barytes—
Rotterdam, 198 cks.
,, 51 J. Rankine & Son
Castor Oil—
Antwerp, 109 cks.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 bx. J. Rankine & Son
Colours—
Rotterdam, 2 brls. 10 cs. 179 pks. J. Rankine & Son
Dyestuffs—
Alizarine
Rotterdam, 127 cks. 29 pks. J. Rankine & Son
Extracts
New York, 2 brls.
Shumac
Palermo, 1,425 bgs. 150 bls.
Farina—
Delfszyhl, 1,540 bgs. J. Rankine & Son
Glucose—
New York, 175 brls.
Glue—
Antwerp, 2 bxs. Jas. Bunten & Co.
Rotterdam, 3 cks. 40 bls. J. Rankine & Son
Rouen, 55 10
Hamburg, 160 bgs.
Guano—
Hangesund, 200 bgs.
Infusorial Earth—
Hamburg, 151 bgs.
Iron Nitrate—
Hamburg, 1 ck.
Phosphate—
Hamburg, 1,000 bgs.
Potash—
Rotterdam, 35 cks. J. Rankine & Son
Pumice Stone—
Messina, 38 bgs. 25 cs. 3 brls.
Rosin—
New York, 50 brls.
Salt—
Hamburg, 50 bgs.
Saltpetre—
Hamburg, 40 kgs.
Soap—
Philadelphia, 650 bxs. 25 crts.
Sodium Sulphate—
Antwerp, 21 cks.
Starch—
Antwerp, 180 cs. 40 bgs.
Philadelphia, 250
Sulphur—
Girgenti, 750 t. Thomas Lawrie
Catania, 805 bgs. 149 cks.
Sulphur Ore—
Seville, 1,155 ts. Seville Sulphur & Copper Co., Ld.
Tar Waste—
Rotterdam, 4 cks. J. Rankine & Son
Tin Oxide—
Rotterdam, 2 cks. J. Rankine & Son
Treacle—
New York, 108 brls.
Philadelphia, 400
New York, 902 Waddell & Bryson
Christiania, 25 cks.
Yarnish—
Antwerp, 1 cs.
New York, 3 brls.
Waste Salt—
Hamburg, 273 cks. 1,379 bgs.
White Lead—
Antwerp, 4 cks.
Rotterdam, 81 J. Rankine & Son
Wood Pulp—
Gothenburg, 534 bls. 84 bdls.
Hamburg, 1,000
Christiania, 1,215 48 cs
Zinc Oxide—
Antwerp, 75 cks.
New York, 150 brls.
Zinc White—
Rotterdam, 30 cks. J. Rankine & Son

TYNE.

Week ending November 7th.

Acetic Acid—
Antwerp, 2 cks. Tyne S. S. Co.
Barium Chlorate—
Rotterdam, 300 bgs. Tyne S. S. Co.
Barytes—
Rotterdam, 412 bgs. Tyne S. S.
Antwerp, 20 ,,
Castor Oil—
Antwerp, 28 brls. Tyne S. S.
Cod Oil—
Drontheim, 2 brls.
Colours—
Hamburg, 2 cs. Tyne S. S.
Ochre—
Rouen, 5 cks. Jos. Ev[illegible]
Pitch—
Antwerp, 3 cks. Tyne S. S.
Salt—
Hamburg, 750 t. Clephan Wi[illegible]
Soap—
Rotterdam, 2 cs. Tyne S. S.
Starch—
Rotterdam, 28 cs. Tyne S. S.
Antwerp, 40 ,,
Stearine—
Antwerp, 6 bgs. Tyne S. S.
White Lead—
Antwerp, 30 bels. Tyne S. S.
Wood Pulp—
Christiania, 549 bls.
Zinc Oxide—
Antwerp, 5 brls. Tyne S. S.

GOOLE.

Week ending November 4th.

Acetic Acid—
Rotterdam, 40 crbys.
Alizarine—
Rotterdam, 50 cks. 2 cs.
Aniline—
Rotterdam, 402 cks. 132 cs.
Hamburg, 40
Antimony—
Boulogne, 1 ck.
Caoutchouc—
Boulogne, 6 cks. 2 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 5 cks. 6 cs.
Dyestuffs *(otherwise undescribed)*
Boulogne, 42 cks. 1 cs. 14 pks.
Antwerp, 23
Farina—
Hamburg, 400 bgs.
Glucose—
Hamburg, 24 cks.
Indigo—
Rotterdam, 2 chts.
Logwood—
Jamaica, 467 t.
Phosphate—
Ghent, 1,000 bgs.
Pyrites—
Seville, 1,725 t.
Starch—
Rotterdam, 10 cs.
Stearine—
Antwerp, 32 bgs.
Ultramarine—
Ghent, 2 cks.
Waste Salt—
Hamburg, 604 cks. 150 t.

GRIMSBY.

Week ending November 7th.

Chemicals *(otherwise undescribed)*
Antwerp, 2 cks. 4 cs.
Rotterdam, 1
Hamburg, 9
Colours—
Hamburg, 32 cks. 4 cs. 172 pks.
Antwerp, 30 14
Rotterdam, 2
Dyes—
Antwerp, 13 pks.
Farina—
Hamburg, 200 bgs.
Starch—
Rotterdam, 15 cs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
k ending November 11th.

—
ndon, 5 kgs. £12
an, 1 t. 6 c 25
—
, 7 t. 12 c. £20
1 16 36
nia (Liquid)—
ne, 12 dms. £58
nium Carbonate—
ne, 2 t. 5 c. £58
aux, 10 cks. 28
eal, 6 16 176
nium Chloride—
, 1 t. 2 c. £36
ne, 9 cks. 63
antinople, 2 10 83
Darwin, 7 15
, 1 1 37
ic—
ngton, 10 c. £15
hite of Lime—
tta, 5 t. 5 c. £77
hing Powder—
ngton, 1 t. £21
and, 10 c. 10
Kong, 80 dms. 17
ic Acid—
els, 1 t. 2 c. 4 cks. £81
—
els, 5 t. 3 c. £216
ngen, 10 cs. 13
urne, 1 17
lic Acid—
burg, 162 cks. £1,281
n, 2 10
leans, 4 29
urne, 20 dms. 42
, 4 cs. 12
nic Acid Gas—
, 25 tubes. £9
c Soda—
Bay, 1 t. 5 c. £34
ico, 7 10 65
Cruz, 7 10 65
and, 10 3 74
ndon, 9 cs. 14
, 3 17 65
cals *(otherwise undes.)—*
res, 18 pks. £24
iania, 1 t. 55
ide, 5 cs. 25
y, 10 kgs. 12 49
, 6 35 51
pore, 22 54
erp, 2 4 c. 20
ngton, 12 cs. 13 69
land, 11 17
burg, 1 ck. 10
, 10 24
burne, 1 t. 2 c. 50 326
rara, 60 carboys 18
ay, 9 cs. 57
, 4 16
Bay, 1,019 10 167
Acid—
ghai, 1 cs. £3
ngton, 1 kg. 87
burg, 4 cks. 126
g, 1 c. 4
res, 10 t. 5 95
tersburg, 14 cks. 441
a, 1 126
Bay, 1 8
ay, 2 15
ane, 2 15
, 1 cs. 4
rdam, 1 30
dam, 2 kgs. 13
r Sulphate—
, 100 t. £1,700
burne, 1 12
i of Tartar—
ide, 10 cs. 5 c. £71
land, 8 37
burne, 2 t. 10 214
ane, 2 13
de—
Darwin, 2 c. £17
Products—
zarine
real, 31 cks. £399
ay, 241 824
Madras, 1 cs. 50
Alizarine Blue
Montreal, 3 cks. £63
Aniline Dyes
Melbourne, 5 pks. £75
Aniline Oil
Dunkirk, 5 dms. £260
New York, 15 800
Aniline Salts
New York, 40 cks. £420
Anthracene
Rotterdam, 47 cks. £350
Dusseldorf, 140 600
Benzol
Adelaide, 55 pks. £101
Amsterdam, 18 dms. 465
Rotterdam, 23 6 puns 61 cks. 1,260
Hamburg, 9 48 413
Creosote
New York, 500 brls. £242
Dieppe, 23,500 galls. 123
Creosote Oil
Hamburg, 100 brls. £60
Creosote Salts
Cologne, 582 brls. £70
Naphtha
Treport, 24 cks. 28 brls. £159
Naphthaline
Hamburg, 52 tgs. 17 cks £182
New York, 250 163
Pitch
M. Video, 12½ cks. £8
Boston, 1,300 brls. 775
Dunkirk, 110 t. 175
Natal, 4 cs. 3
New York, 455 3,381 bgs. 849
St. Nazaire, 343 500
Abo, 90 142
Hochfeld, 270 534
Prussian Blue
Amsterdam, 2 cks. £9
Pyridine
Hamburg, 12 cks. £145
Tar
E. London, 300 dms. £9
Stettin, 200 brls. 100
Natal, 750 97
Abo, 500 283
Cologne, 250 125
Aviles, 725 cks. 1,088
Disinfectants—
E. London, 6 dms. £23
Hamburg, 127 pks. 30 cks. 127
Rangoon, 45 43
Madras, 24 23
Algoa Bay, 230 2 cs. 40 509
Cape Town, 2,958 55 60 934
Brussels, 10 t. 14 c. 87
Bombay, 50 45
Natal, 300 pks. 117
Guano—
Sydney, 1 t. £60
Hypophosphites—
New York, 15 cs. £230
Magnesia—
Antwerp, 16 cs. £35
Manure—
Ghent, 46 t 6 c. £46
Landerneaux, 180 1,440
Ostend, 50 390
Calcutta, 5 13
Demerara, 15 35
Jamaica, 2 10 26
Auckland, 40 175
Genoa, 5 20
Jersey, 145 11 474
Oxalic Acid—
Lisbon, 1 t. 6 c. £43
Phosphorus—
B. Ayres, 5 c. £55
Adelaide, 10 cs. 97
Melbourne, 2 20
Potassium Chlorate—
B. Ayres, 2 t. 12 c. £188
Lisbon, 1 36
Potassium Cyanide—
Melbourne, 1 t. £121
Tu Acorin, 4 c. 19
Potassium Prussiate—
St. Petersburg, 32 cks. £547
Genoa, 4 t. 5 c. 210
New York, 10 cks. 182
Melbourne, 2 7
Yokohama, 1 10 89
Saltpetre—
Santos, 2 t. 14 c. £60
Syra, 9 1 185
Algoa Bay, 9 11
Colombo, 1 5 27
Melbourne, 4 88
Rio de Janeiro, 4 7 97
Montreal, 5 103
Piræus, 1 5 27
Paysandu. 2 1 44
Salts of Soda—
New York, 4 c. £20
Sheep Dip—
Gallegos, 256 cs. 104 cks. 60 kgs. 159 dms. £1,483
Patagonia, 35 t. 5 cks. 83
B. Ayres, 74 11 c. 1,677
M. Video, 26 10 556
Bombay, 8 cs. 3 45
Algoa Bay, 50 dms. 13
E. London, 50 13
Natal, 11 12 20 349
Cape Town, 5 5 30 94
Delagoa Bay, 50 11
Soap—
Rotterdam, 11 c. £12
Soda—
Colombo, 6 c. £5
Soda Alkali—
Rotterdam, 5 t. 14 c. £36
Soda Crystals—
Boston, 2 t. 10 c. £36
Sodium Hyposulphite—
Vera Cruz, 11 t £97
Tampico, 200 kgs. 99
Sodium Sulphate—
Ghent, 55 t. £55
Sodium Sulphite—
New York, 1 t. 8 c. £161
Sodium Tartrate—
Montreal, 3 t. 9 c. £184
Sulphur—
Hancock, 8 c. £6
Sulphuric Acid—
Chinde, qty. £20
Tartaric Acid—
Sydney, 1 t £121
Hiogo, 1 10 c. 175
Yokohama, 10 58
Melbourne 1 114
Adelaide, 5 10 cs. 95
Natal, 2 12
Fremantle, 5 33
B. Ayres, 10 1 97
Napier, 4 kgs. 25
Zinc Chlorate—
Paysandu, 14 c. £19

LIVERPOOL.
Week ending November 11th.

Acetic Acid—
Lisbon, 1 t. 19 c. 2 q. £12
Albumen—
Boston, 4 t. 14 c. £100
Alum—
San Francisco, 7 t. £35
Constantinople, 4 20
Smyrna, 3 13 c. 17
Bourgas, 8 1 q. 2
Catania, 5 1 3 24
Alexandretta, 10 14 3 50
M. Video, 1 9 1 7
Ammonia (Liquid)—
Oporto, 2 t. 6 c. 1 q. £50
Ammonium Carbonate—
Gothenburg, 11 c. 3 q. £18
Stettin, 5 3 7
Havana, 18 24
New York, 7 3 13
Ammonium Chloride—
Alexandria, 3 t. 2 c. £106
Bilbao, 1 6 1 q. 22
Leghorn, 12 21
Santander, 1 35
Galatz, 6 10
Ibrail, 2 2 3 81
Calcutta, 1 10 50
Ammonium Sulphate—
Gd. Canary, 10 t. £76
Philadelphia, 50 8 c. 3 q. 390
Marseilles, 51 5 3 385
Sourabaya, 26 13 210
Valencia, 40 3 2 297
Montreal, 3 2 3 25
Teneriffe, 10 4 75
Bleaching Powder—
Baltimore, 178 cks.
Bilbao, 30 brls.
Bombay, 38 bxs. 15 cs.
Boston, 441
B. Ayres, 36
Calcutta, 60
Callao, 13
Corunna, 4
Halifax, 5
Montreal, 109
Naples, 29
New York, 539
Oporto, 12
Paris, 17
Santos, 4
Boracic Acid—
Montreal, 2 t. £58
Sydney, 3 100
Antwerp, 6 11 c. 201
Yokohama, 2 60
Adelaide, 1 2 q. 40
Borax—
B. Ayres, 6 c. £15
Hamburg, 72 t. 12 2 q. 1,443
Stettin, 17 17
Sydney, 3 60
Antwerp, 6 13 133
Campana, 15 16
Ghent, 5 7 107
Yokohama, 2 19 2 60
New York, 1 3 20
Montreal, 8 7 3 154
Adelaide, 2 2 1 42
Barcelona, 12 6 2 245
Genoa, 1 11 3 33
Calcium Chloride—
Odessa, 40 t. 3 c. £90
Carbolic Acid—
Dunkirk, 5 t. £315
Rotterdam, 15 11 c. 280
Hamburg, 1 6 75
Victoria, V.I., 4 2 q. 2
New York, 2 12 179
Hiogo, 2 10 149
Caustic Potash—
Philadelphia, 5 c. £7
San Francisco, 2 t. 1 43
Caustic Soda—
Adelaide, 35 dms.
Alexandria, 126
Alicante, 80
Baltimore, 190 50 brls. 110 bxs.
Barcelona, 281 90 cks.
Bari, 68
Bilbao, 60
Bombay, 26
Boston, 50
B. Ayres, 260 2
Calcutta, 7
Cape Town, 20
Ceara, 30
Corunna, 16
E. London, 20 10 cs.
Fiume, 93
Galatz, 52
Halifax, 25
Hamburg, 100
Havana, 130
Jaffa, 100
Limassol, 10
Madeira, 25
Malaga, 28
Montreal, 125
New York, 595
Odessa, 725
Oporto, 69
Paris, 83
Philadelphia, 130
Quebec, 25 pks.
Rio de Janeiro, 92
San Francisco, 325
San Sebastian, 74
Seville, 250
Tampico 200
Teneriffe, 3
Chemicals *(otherwise undescribed)*
Montreal, 2 t. £59
Antwerp, 10 c. 18
Oporto, 4 7
Campana, 5 9
Alexandria, 1 6 35
N'wcastle, NSW., 1 15 51
Stettin, 2 5 67
Marseilles, 3 13 111
Hamburg, 3 83
New York, 5 5 172
B. Ayres, 25 2 126

Calcutta, 70 16 103
Bombay, 11 1 2 q. 63
Philadelphia, 20 1 640
Constantinople, 2 10 87
Pegau, 12 21
Lagos, 1 cs.
Valparaiso, 1 2 7

China Clay—
Bombay, 152 cks.
Boston, 1,750 250 bgs.
Montreal, 190
Rio de Janeiro, 40

Chromium Oxide—
Valencia, 1 c. £9

Citric Acid—
N. Orleans, 2 c. £15

Coal Products—
Alizarine Oil
Lisbon, 1 ck.
Aniline Colours
Bombay, 2 cs.
Aniline Oil
Genoa, 7 dms.
Montreal, 6
Aniline Salts
Genoa, 8 cks.
Lisbon, 9
Madras, 2
Montreal, 31 cs.
Syra, 1 brl.
New York, 34
Creosote
Bordeaux, 28 t. 2 c. 100 cks.
Naphthol Colours
Boston, 15 kgs.
Philadelphia, 1 ck.
New York, 30
Tar
Batavia, 59 brls
Cartagena, S.A., 1 ck.
Cheribon, 100
Kustendjie, 10
Para, 12
Samarang, 113
Sourabaya, 105

Cobalt Oxide—
Valencia, 1 c. £32

Copper Sulphate—
Galatz, 1 t. 2 c. £18
Bari, 2 6 37
Barcelona, 9 19 158
Danzig, 10 2 q. 154
Dunedin, 1 10 24
B Ayres. 3 11 58
Talcahuano, 18 18 2 143
Canterbury, N Z., 2 10 41
Ghent, 2 10 3 41
Nantes, 10 4 172
Bordeaux, 19 13 968
Sydney, 25 413
Alexandria, 12 3 16
Newcastle, NSW., 10 8
Marseilles, 66 2 976

Disinfectants—
Bombay, 10 c. £10

Gypsum—
Montreal, 5 t £19

Iron Oxide—
Gijon, 31 11 c. 3 q. £20

Lime—
Lagos. 4 t. 15 c. £12
Little Popo, 3 18 19
Gd. Popo, 3 16 10

Magnesia—
New York, 3 c. 12 q. £97

Magnesium Sulphate—
Karachi, 25 cks. 5 bgs.

Manure—
Teneriffe, 10 t. £89
Marseilles, 10 1 c. 56
St Malo, 350 11 1 q. 1,452
Vancouver, 8 2 2 20
Kingston, Ja., 4 83
Las Palmas, 20 154

Mica—
St. John, N.B., 1 cs.

Oxalic Acid—
San Francisco, 3 t. 4 c. £103
Boston, 9 22 306
Stettin, 4 19 2 q. 170

Paint—
Oxim, 4 kgs.
Alexandria, 42
Beyrout, 2 cks. 50 3 brls.
B. Ayres, 17 dms.
Calcutta, 54 60
Corfu, 5
Curacao, 41
Gijon, 8 5
Havre, 1 brl. 21
Hiogo, 30
Lagos, 131 pks. 2
Manaos, 10 cs.
Mayaguez, 2 50
New York, 2 4 302
Pernambuco, 60
Ponce, 4
Rosario, 4
Rotterdam, 19 2
San Juan, 50
Santiago de Cuba, 2
Smyrna, 100
Sulina, 3
Tampico, 2 cs.
Talcahuano, 1
Valparaiso, 7 20
Vera Cruz, 130

Painters Colours—
Accra, 15 dms. 85 kgs.
Alexandria 55 pks. 64 5 brls. 3 cs.
Bahia, 10
Boston, 16
B. Ayres, 13 cs. 47 cks.
N. York, 8 pks. 150 100
Oporto, 1 cs. 6
Para, 18 9
Philadelphia, 84
Rio de Janeiro, 12
Salonica, 3 tcs.
San Francisco, 20
Seville, 17
Sourabaya, 6
Syra, 10
Vancouver, 5 9

Paraffin Wax—
Genoa, 175 pks.
Patras, 3 t. 19 c.

Phosphorus—
Maranham, 2 c. £30

Picric Acid
New York, 10 c. £46

Potassium Bichromate—
Mexico City, 2 t. 7 c. £94

Potassium Carbonate—
New York, 8 t. 18 c. £186

Potassium Chlorate—
Naples, 1 t. £39
Algoa Bay, 10 c. 20
Oporto, 1 5 47
Genoa, 10 19
B Ayres, 1 60
Riga, 5 196
Rotterdam, 10 20
Antwerp, 1 5 44
New York, 27 10 1,059
Hamburg, 1 10 59
Tampico, 1 35
Hiogo, 40 1,415
Yokohama, 5 186

Potassium Prussiate—
Marseilles, 2 c. 1 q. £5

Salt—
Accra 17 t. 10 c.
Alligator Pond, 3
Amsterdam 120
Antwerp, 1 13
Baltimore, 250
Belize, 145 7
Berracoe, 25 15
Boma, 4 19
Boston, 630
B. Ayres, 21 1
Calcutta, 2 3
C. C. Castle, 10
Cape Town, 1 13
Dunedin, 137
Faroe Islands, 170
Galveston, 500
Ghent, 239
Gibraltar, 1 13
Gothenburg, 1 13
Hamburg, 510 10
Lagos, 38 15
Manaos, 7 3
Matadi, 62
Montreal, 1,356
Nakskov, 50
Newcastle, 400
N. Orleans, 1,000
Newport News, 613 13
Opobo, 10
Para, 231 5
Puget Sound, 400
Quillo. 46 17
Rangoon, 2,085
Salt Pond, 12 10
San Francisco, 74 18
Savannah, 40
Sapeli, 6 5
Sydney, 50
Valparaiso, 79 5
Vancouver, 70 6
Victoria, B. C., 200
New York, 550

Salt Cake—
Leghorn, 30 t £45

Saltpetre—
Maranham, 11 c. 3 q. £13
Ceara, 1 t. 5 3 23

Satinite—
Stettin, 11 t. 2 c. £31

Sheep Dip
M. Video, 4 t. 12 c. 3 q. £200
B. Ayres, 11 3 9 335
10 cks. 100 dms.
Calcutta, 2 t. 5 70
Sydney, 40 dms. 25

Soap—
Alexandria, 11 cs.
Algoa Bay, 550 bxs. 50
Axim, 200
Bathurst, 10
Bermuda, 50
Boca Del Toro, 100
Bombay, 280 26
Boston, 2 cks. 30 brls.
Calcutta, 500 bdls. 9
Cape Town, 950 48
Christiania. 30
Christchurch, 300
Conakry, 480
Constantinople, 20
Coquimbo, 1
Curacao, 298
Delagoa Bay, 1,255 27
Dunedin, 400
E. London, 1,375 33
Gibraltar, 112
Havre, 1,050
Jaffa. 1
Karachi, 1
Las Palmas, 300
Madras, 15
Malta, 140
Melilla. 200
Mollendo, 56
Montserrat, 40
Mossel Bay, 100
N. Orleans, 550
New York, 210 18
Old Calabar, 1
Panama, 1
Penang, 200 1
Philadelphia, 1
Piræus, 90
Pt. Natal, 785 2 24
Pt. Said, 7
Rotterdam, 418
St. John's, N'fd., 25 5
St Lucia, 379
St. Nazaire, 3
San Juan, 50
Singapore, 2,120 200
Sinoe, 5
Smyrna, 30 2 brls. 21
Sulina, 15 dms.
Teneriffe, 550
Valparaiso, 10 kgs. 6
Vancouver, 2
Wellington, 900

Soda—
Santos. 4 dms.

Soda Alkali
Boston, 25 cks.
Odessa. 150 brls.
Smyrna, 41

Soda Ash—
Adelaide, 250 cks.
Antwerp, 700 bgs.
Baltimore, 65 tcs. 2,168
Barcelona, 6
Beyrout, 50
Bombay, 8
Boston, 74 137 1,600
B. Ayres, 50 50 brls.
Calcutta, 100
Fiume, 98
Genoa, 200
Ghent, 30
Gothenburg, 25
Halifax, 15
Hamburg, 220 950
Havana. 3
Karachi, 32
Leghorn, 300
Madeira, 10
M. Video, 20
Montreal, 3 56 95
Naples, 230
New York, 135 tcs. 2 880
Para, 10
Philadelphia, 267 4,000
Rio de Janeiro, 21
Rotterdam, 20 50
San Francisco, 192 133
Smyrna 50
Sourabaya, 2 brls.
Vigo, 5

Soda Crystals—
Algoa Bay, 10 cks 20 kgs.
Bombay, 100
Boston, 50 bgs 84 700 brls. 400
B. Ayres, 20 146
Halifax, 75 25
H'burg, 100
Malta, 30
Montreal, 77
M. Video, 2
N. Orleans, 140
New York, 280 280
Penang, 83
Philadelphia, 200 490 37
Portland, 3
Valparaiso, 12

Soda Oxide—
Manila, 70 cs.

Sodium Arseniate—
New York, 50 cks.

Sodium Bicarbonate—
Adelaide, 5 cks 20 bgs. 13
Alexandria, 3
Antwerp, 80
Baltimore, 50 250
Bombay, 300
Boston, 54 3
B. Ayres, 121
Calcutta, 9 235
Candia, 20
Cape Town, 90
Genoa, 100
Halifax, 103
Hamburg, 4
Karachi, 250
M. Video, 200
Montreal, 583
N. York, 50 pks. 90
Palermo, 2 20
Paris. 9 100
San Francisco, 40 3
Smyrna, 20 370
Victoria, B. C., 2

Sodium Carbonate—
Boston, 240 brls

Sodium Chlorate—
Boston, 125

Sodium Silicate—
Bilbao, 35 cks.
Corunna, 27 brls.
Santander, 16
Sourabaya, 3
Valencia, 500 kgs.
Vera Cruz, 10

Sodium Sulphate—
Antwerp, 10 cks.
Montreal, 58
Genoa, 1,000 bgs.

Starch—
Salonica, 20 cs.

Strontia—
Hamburg, 119 t. 15 c. £

Sulphur—
Trinidad, 5 t. 2 c.
Boston, 735 3
Montreal, 75 2
Calcutta, 6

Tartaric Acid—
B. Ayres, 3 t. 3 c.

Tin Oxide—
Valencia, 2 c. 1 q.

Varnish—
Barcelona, 2 cs.
Callao, 2
Leghorn, 2 cks.
Oporto, 12 4 brls
Rio de Janeiro, 3 dms.
Seville. 2
Smyrna, 80
Valparaiso, 3

White Lead—
Batavia, 200 kgs.
Bilbao, 4 brls.
B. Ayres, 20 cks.

Zinc Chloride—
Bilbao, 1 t. 3 c.
Bombay, 4

MANCHESTER

Week ending November 13th.

Alum—
Beyrout, 35 cks.
Tripoli, 33

Aluminaferric—
Bombay, 48 bgs.

Ammonium Carbonate—
Antwerp, 32 cks.

Ammonium Sulphate—
Rouen, 477 bgs.

Aniline Colours—
Rotterdam, 2 cs. 14 kgs.

Aniline Oil—
Rouen, 3 dms.

Benzol—
Rotterdam 11 cks. 23 dms.

Carbolic Acid—
Rotterdam, 65 cks.
Treport, 250 tins.

stic Soda—
x, 10 dms.
nis, 25
micals *(otherwise undes.)*—
exandretta, 40 cks.
rrout, 5
naca, 1
per Sulphate—
rport, 20 cks.
esote Salts—
tterdam, 3 cks.
rport, 35
trine—
ia, 10 cks.
eed Oil—
xandria, 30 brls.
rrout, 12
is, 3
nesium Sulphate—
nbay, 25 cks. 30 bgs.
ral White—
de Janeiro, 10 bgs.
n—
werp, 102 t. 3 c.
logne, 285 10
—
ta, 2 bxs.
—
terdam, 1 bg.
um Bicarbonate—
rout 30 kgs.
m Silicate—
10 brls.
ow—
abay, 6 cks.
terdam, 6
—
port, 30 brls.
Oil—
port, 26 brls.
ol—
terdam, 17 cks. 75 brls.
Chloride—
terdam, 1 ck.

HULL.

Week ending November 7th.

li—
enburg, 10 cks.
— 98 bgs.
onium Sulphate—
York, 102 bgs.
ching Powder—
rig, 39 cks.
ingfors, 124
in, 19
tic Soda—
terdam, 38 dms.
6
micals *(otherwise undescribed)*
andria, 20 cks. 12 cs.
terdam, 25 6 pks.
en, 2 10
tiania 10 5 19
nhagen, 30
ig, 21 7 20
enburg 16 53
ingfors, 1 20
burg, 4 110
n, 30
22 31
erdam, 31 120
in, 11
nseed Oil—
erdam, 934 c.
erp, 498
tiania, 34
theim, 27
ig, 127
enburg, 138
burg, 518
gsberg 48
koping, 99
erdam, 663
in, 81
uffs *(otherwise undes.)*—
erp, 1 ck.
tiania, 93 bgs.
1 cs.
holm, 13
—
i, 4 cks.
ed Oil—
erdam, 1,986 c.
tiansund, 127
tiania, 374
nhagen, 255
Drontheim, 199
Hamburg, 127
Stockholm, 200
Manure—
Bordeaux, 59 t.
Dunkirk, 17
Helsingfors, 10 cks.
Stettin, 196 t.
Painters' Colours—
Amsterdam, 40 cks
Antwerp, 5 1 dm.
Bergen, 2 cs.
Christiania, 44 1 12
28 pks.
Copenhagen, 1
Dunkirk, 2
Drontheim, 1
Danzig, 12
Gothenburg, 7 2 4
Hamburg, 38
Hango, 18
New York, 270
Rouen, 8
Rotterdam, 19 1 18 pks.
Stettin 19
125 t.
Stockholm, 6 cks.
Pitch—
Antwerp, 162 t.
Rotterdam, 6 cks.
Soap—
Bremen, 3 cs.
Christiania, 3
Stockholm, 1
Starch—
Copenhagen, 130 cs.
Tallow—
Alexandria, 35 cks.
Amsterdam, 32
Christiania, 11
Rotterdam, 41
Tar—
Copenhagen, 10 cks.
Hamburg, 5
Rotterdam, 10
Stettin, 10 2 tins
Amsterdam, 6
Varnish—
Antwerp, 1 cs
Bergen, 2 cks.
Danzig, 1
Stettin 11
Stockholm, 1 2
Amsterdam, 1
Ghent, 1
Gothenburg, 1
Hamburg, 2 2
Rouen 3

GLASGOW.

Week ending November 12th.

Ammonium Sulphate—
Hamburg, 50 t. 13 c.
Rotterdam, 50 15
Boracic Acid—
Hiogo, £143
Borax—
Canada, £196
Coal Products—
Alizarine Colours
Almonte, £129
Aniline Dyes
Calcutta, £28
Creosote
France, £450
Pitch
Calcutta, £110
Canada, 262
Hamburg, 114 t. 17 c
St. Nazaire, 40 17
Tar
Calcutta, £35
Tar Oil
Hamburg, 1 t. 19 c.
Coal Products *(otherwise undes.)*—
Rotterdam, £258
Extracts—
Almonte, £133
Christiania, 10
Canada, £1,021. 10s.
Montreal, 179 11
Gelatine—
U.S.A., £304
Linseed Oil—
Canada, 37 t. 17 c.
Hiogo, 1 6¼
Hong Kong, 4 15½
Yokohama, 2 10
Durban, 2 2½
Logwood—
Canada, £198
Montreal, 230
Madder—
Almonte, £33. 12s.
Manganese—
Rotterdam, 2 t. 12 c.
Paint—
Colombo, £52
Singapore, 96
Natal, £21. 13s.
Painters' Colours—
Calcutta, qty.
Hiogo, "
Singapore, £124
Straits Settlements, 64
Christiania, 30
Cape Town, "
Pt. Elizabeth, 53
Paraffin Wax—
Paris, £47
Potash Salts—
Singapore, £85
Potassium Bichromate—
Canada, £371
Paris, 226
Rotterdam, 21
Amsterdam, 212
" qty.
Sheep Dip—
B. Ayres, £139
Soap—
Colombo, 1 t. 7 c.
E. London, 2 10
Transvaal, 5
Sodium Bichromate—
Almonte, £46. 6s.
Canada, 7 t. 18¾ c.
Roanne, 5 6¼
Rouen, 10 11½
Starch—
Rotterdam, 10 c.
Sulphuric Acid—
Colombo, £30
M. Video, 36
Tallow—
Rotterdam, 13 t. 2 c.
Treacle—
Christiania, 13 t. 19 c.
Pt. Elizabeth, 2 10
Aalesund 19 13
White Lead—
Yokohama, £37
Calcutta, 27
Zinc Ashes—
Rotterdam, 37 t. 18 c.

TYNE.

Week ending November 7th.

Alkali
Hamburg, 5 t. 11 c.
Riga, 110 16
Gefle, 2 18
Alum Waste—
Copenhagen, 5 t. 1 c.
Antimony—
Riga, 2 t.
Montreal, 2
Arsenic—
Gothenburg, 1 t. 8 c.
Barium Carbonate—
St. Petersburg, 33 t.
Bleaching Powder—
Antwerp 45 t. 1 c.
Oporto, 14 3
St. Petersburg, 121 4
Copenhagen, 36 1
Rotterdam, 21 1
Lisbon, 15 1
Helsingfors, 75 7
Gothenburg, 60 5
Caustic Soda—
Seville, 33 t. 17 c
St. Petersburg, 60 7
Riga, 60 6
Aalborg, 4 7
Copenhagen, 2 16
Pernau, 16 9
Helsingfors, 169 4
Abo, 2 18
Gefle, 24 17
Montreal, 44 10
Gothenburg, 4 18
Copperas—
Odense, 5 t. 3 c.
Litharge—
Oporto, 1 t. 3 c.
Riga, 3 13
Copenhagen, 1 2
Rotterdam, 6
Stockholm, 4 19
Magnesia—
Antwerp, 2 c.
Odense, 6
Paint—
Antwerp, 5 c.
Genoa, 4
Painters' Colours—
Genoa, 6 t. 5 c.
Plumbago—
Bergen, 4 c.
Soda—
Antwerp, 10 t. 8 c.
Oporto, 15 12
Rotterdam, 10
Lisbon, 5 4
Stockholm, 11 17
Gefle, 75 6
Gothenburg, 12 11
Sodium Prussiate—
St. Petersburg, 2 t. 4 c.
Sodium Sulphate—
Riga 30 t. 7 c.
Gefle, 150
Sulphur—
Gothenburg, 280 t.
Tar—
Copenhagen, 12 t. 7 c.
Varnish—
Genoa, 2 c.
White Lead—
Oporto, 2 t. 8 c.
Riga, 2 15
Copenhagen, 1 4
Stockholm, 12
Gothenburg, 12

GOOLE.

Week ending November 4th.

Benzol—
Boulogne, 23 cks.
Rotterdam, 48
Hamburg, 24
Chemicals *(otherwise undescribed)*
Antwerp, 1 ck.
Ghent, 1
Hamburg, 62
Harlingen, 62
Coal Products *(otherwise unaes.)*—
Amsterdam, 49 cks.
Antwerp, 4 1 dm.
Boulogne, 53 2 cs. 2
Ghent, 5
Hamburg, 25
Rotterdam, 191
Colours—
Boulogne, 2 cs.
Hamburg, 3 cks. 5 t.
Harlingen, 3 200 bgs.
Dyestuffs *(otherwise undescribed)*
Ghent, 3 cks.
Manure—
Dunkirk, 190 bgs.
Boulogne, 44
Ghent, 100 t.
Pitch—
Antwerp, 343 t.
Dunkirk, 230

GRIMSBY.

Week ending November 7th.

Alkali—
Hamburg, 27 cs.
Chemicals *(otherwise undescribed)*
Antwerp, 1 ck. 177 pks.
Dieppe, 2
Malmo, 15
Hamburg, 46 dms.
Coal Products *(otherwise undes.)*—
Dieppe, 142 cks. 4 pks.
Hamburg, 4
Rotterdam, 1
Colours—
Antwerp, 8 cks. 1 cs.
Dieppe, 10
Hamburg, 6
Malmo, 14
Rotterdam, 2
Zinc Ashes—
Rotterdam, 75 bgs.

PRICES CURRENT. WEDNESDAY, NOVEMBER 18TH, 1896

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary.

	£	s.	d.
Acids :—			
Acetic, 25 %, and 40 % .. .. per cwt.	5/10½ & 8/9		
,, Glacial .. .. ,,	0/-		
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B .. .. per lb.	0	0	2¾
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	20	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/-& 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4¼
,, Sulphate (grey) London .. .. .. per ton	8	0	0
,, ,, (grey) Hull .. .. ,,	7	16	3
Aniline Oil (pure) .. .. per lb.	0	0	11
Aniline Salt ,, ... ,,	0	0	10½
Antimony .. .. per ton	29	15	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	14	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	4	3
,, 50/90 ,, ... ,,	0	3	0
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	2	0
Creosote (ordinary) .. .. ,,	0	0	1½
,, (filtered for Lucigen light) .. .. .. ,,	0	0	2
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	7
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	49	7	6
,, Sulphate .. .. ,,	16	10	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	42	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. .. — .. .. ,,	12	15	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	22	0	0
,, ,, brown ,,) .. .. ,,	14	15	0
,, *Carbonate (white lead) pure* .. .. .. ,,	16	0	0
,, *Nitrate* .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	10	0
,, ,, (grey) (ex ship .. .. ,,	8	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	3
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magne .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	7
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	0
Oils :—			
Cotton-seed .. .. per ton	17	0	0
Linseed .. .. ,,	18	10	0
Petroleum, American .. .. per gallon	0	0	7
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98% .. .. ,,	0	1	1
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	21	0	0
,, ,, (Caustic Potash) 70/75 % .. ,,	20	0	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	5½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	5½
Sodium (metal) .. .. per lb.	0	0	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % . ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,, ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,, ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,, ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	7	6
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5
,, Borate (Borax) .. .. net, per ton.	20	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	17	6
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	0	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4¾
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton.	7	10	0
(Roll Brimstone) .. .. ,,	6	10	0
,, Brimstone : Best Quality .. .. .. ,,	4	12	6
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	4¾
,, English Ingots .. .. per ton	63	10	0
Zinc (Spelter) .. .. ,,	18	2	6
,, Chloride (solution, 120° Tw.) .. .. .. ,,	5	2	6

THE

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EXAMPLE, NOT PRECEPT.

AFTER all that has been said about technical education during the last six months, and the many expressions of opinion that manufacturers are altogether too much behind the times, it might be supposed that a great many of those who act as controllers of public affairs would also look to their doings, and bring themselves into line with the new *regime* which is deemed so essential to the salvation of English industry.

We are told that the aniline colour industry was virtually lost to this country owing to the antiquated nature of our scientific education, and the consequent ineptitude of the rising generation of chemists. It is not wholly incorrect, no doubt.

Again, we are told that we have much to fear and more to learn from our Teutonic neighbours' system of scientific training and education.

Having given us the go-by in chemical matters, it is said they are now ahead of us in having six great technical institutions for the study of electrical problems, institutions which are superior to anything of the kind we have in this country. We are sorry to admit that this is the case.

Furthermore, to come nearer home, manufacturers are charged with being indifferent to the influence of science upon manufacturing operations. They do not appreciate as they should the necessity of encouraging, and what is more, supporting—both actively and monetarily—original research.

They are saddled with the belief that money so spent, on what appear to be abstract investigations, far removed from the practical things of life, has little or no effect on the well-being of the nation and national commerce. It is a heavy indictment, and all the heavier because it is perhaps the most substantial of the many charges made.

What shall be said, then, when those leading lights who would teach us our duty to the nation do not quibble at the expenditure of money on merely "abstract investigations," but at the outlay of the paltry sum of £260. for the chemical control of a commodity so vital to the national welfare as the water supply of the Metropolis? At a recent meeting of the London County Council the Water Committee reported:—

"That their attention had been called to the desirability of continuing the examination of the water supplied by the London water companies by the micro-filter method devised by the Council's chemist. The companies' chemists reported that there were no suspended matters in the London filtered water, and the official analyst, Dr. Frankland, did not refer to them in any way, while, on the other hand, the chemists who had made investigations for the Council had definitely supported the results obtained by the Council's chemist, in which he had been able to show that suspended matters were present in greater or less quantities, and that they were capable of being collected, weighed, and analysed when a sufficient quantity of water was taken. The chemist had submitted estimates of the cost of examining the water supply of each company. For examining the water three times weekly, making 24 samples a week, the cost would be £10. a week, and for a daily

examination, making 48 samples a week, £14 10s. The committee recommended that the chemist be instructed to make three examinations weekly of the water supply of each company, for a period of six months, at a cost of £10. a week, or £260. in all."

Now a certain noble lord considered £10. a week an exhorbitant sum to spend on this work. Another knighted member of Parliament characterised the proposal as a waste of the ratepayers' money. He could see no reason why they should spend public money in examining water which had already been carefully examined by Dr. Frankland, while yet another gentleman was of the opinion that the proposal entailed an extravagant expenditure of the ratepayers' money.

It is "extravagant" to spend £260. on a further inquiry into the statement that the overlooking of a microscopical amount of suspended matter in drinking water means in the aggregate 1,100 tons of suspended matters finding their way into the insides of the consumers. What in the name of fortune then must we designate the expenditure of £3,000. on gas testing, which at the best could only contribute in a vastly minor degree to the health of the consumers? Fortunately the general wisdom of the Council prevailed, and the recommendation of the Committee was agreed to.

But is this the way such men of standing and repute show the poor, backsliding manufacturers the errors of their ways? No wonder technical education is so unproductive, if the counsels of such as these are allowed to be heard, let alone prevail. Such tin-pot tinkering is exasperating beyond sufferance. We only wish his noble lordship could first be *compelled* to do the analyses for a month at £10. a week, keeping himself on the balance of the "exhorbitant sum," and then made to eat his words—he would have very little else to eat.

GLASGOW SEWAGE AS A FERTILIZER.

ON Saturday last week about seventy students of agriculture in the Glasgow Technical College visited the sewage works at Dalmarnock. The party was conducted by Professor Wright and Mr. Campbell, and was received by Mr. Melvin, the manager of the works. After the inspection, Professor Wright said that they were greatly indebted to the Sewage Committee and to Mr. Melvin for having allowed them to see through the works. The Dalmarnock works formed part of a large scheme undertaken by their enterprising Town Council. Its primary object was the purification of the Clyde, but in a secondary way it was a scheme of great importance to agriculture. On one basis of calculation it might be estimated that the total sewage discharged into the Clyde from Greater Glasgow had a value for manurial purposes of £200,000. per annum, which had hitherto been wholly wasted. The Dalmarnock works would soon be dealing with a quarter of that amount. They had seen, however, that in the method of purification there adopted a large portion of the sewage was separated in a form in which it could be utilised as manure. Additional buildings were now being erected, and when they were completed the Corporation would be able to offer to farmers a large quantity of manure in the very suitable form of a dry powder.

What the precise value of that manure would be he could not say, but it would undoubtedly have a considerable value. It contained a large percentage of lime, which was always of value to land, and also a percentage of nitrogen, the most costly ingredient used in manures. He expected that next summer the agricultural department of the Technical College, which annually carried out manurial experiments on about 60 separate farms in the south-west of Scotland, would be able to institute an extensive series of trials of the sewage manure on the different farm crops, and he believed the results would confer great benefits both on the city of Glasgow and on agriculture.

RESIN *via* THE CANAL.—This week the Norwegian barque *Espeland*, 385 tons register, has discharged at Trafford Wharf a cargo of between two and three thousand barrels of resin from Charleston, Georgia. The *Kubla*, 538 tons, arrived from Savannah with a similar cargo. The *Hoiden*, 751 tons, left Brunswick, Georgia, on the 31st ult., and the *Korumo*, 544 tons, left Savannah on the 5th inst., both with resin for Manchester. Other fixtures include the *Avaral*, 425 tons, and *Bergslein*, 909 tons, both from Savannah.

Our Book Shelf.

THE COMMERCIAL ORGANISATION OF FACTORIES By J. S. L
540 pp. (including Index), with diagrams and specimen sh
London: E. and F. N. Spon 1896.

This work is an unique one, and is we believe the first to so clearly and successfully a bird's eye view, as it were, complete system for the organisation of industrial concerns an cognate accounts. Though apparently voluminous, in reality it is since the bulkiness is due to the very bold type employed, whi itself is an advantage in a book of this nature. It is compiled o paragraph system, and every diagram or specimen sheet has its l press reference boldly conspicuous. The author claims that the is most suitable for manufacturers, directors, auditors, engi managers, secretaries, accountants, cashiers, bookkeepers, student pupils, and we cannot take exception to one of these claims, whi certainly has had ample opportunity of acquiring exceptional mation in the capacity of general manager for Messrs. P. R. Ja and Company, Limited.

But to revert to the book itself. The best idea of its scope w gathered from the diagram we reproduce on pages 342 and 34 sets forth a complete system in such a manner that the dovetail of every department, as a portion of the whole, can be speedily and comprehended. With such a knowledge the scheme can read modified to suit individual requirements, and it has been constr with this view, so that where omissions are necessary the discon ends can still be coupled up, to form a working scheme. It is Chinese puzzle in which every part has its place, and its re renders the whole imperfect.

The book will therefore be welcomed by many who already control of large engineering or industrial establishments, although they may not follow the system in its entirety, they will the wherewithal to draw one out so as to suit their own circumsta

The duties and qualifications of the directors, manager, and hea departments in the office and works, and their relations to one ano are very clearly defined. If the lines indicated were followed there should be very little of that friction which so often ob between the heads of departments when their positions are not prop understood.

The author, to our mind, very justly claims that the syste accounts presented may be termed an interlocking system, under w each account is brought into line monthly, and a general balanci the whole effected.

Throughout, the use of diagrams is strongly advocated, and diag matic proofs of the advantages claimed for such a method are gi As an instance we may cite the diagrammatic form of directors' re which shows at a glance the rise or fall of values, ratio of expen increase or decrease of sales, wages, etc., information which it w otherwise take a mass of intricate figures to show. Another cas point is the diagram kept by the manager, and which shows on sheet the rise and fall of purchases, sales, work in progress, st establishment charges, and estimated profits. Again, for the w there are diagrams of the amount of coal used, with the pressur steam in the boilers, etc.

The Drawing Office and Estimating Department are briefly touc upon, and some helpful suggestions made as to the lines upon w they should be conducted.

The treatment of tenders, penalty clauses, purchasing of stores, h on carriage, the saving that may be effected by classificatio merchandise, the vexed question of packing cases, their storage return, shipping, underwriters and insurance are topics which are well handled. Establishment charges are dealt with very thoroug each department being charged with its proper share of expenditur the separate ledgers—*apropos* of which another large coloured diag is given, showing how these books work in with each other. methods of appointing agents and travellers, and their obligatio the firm are given, while the treatment of pupils and appren together with some remarks on trade unions, also appear towards end of the book. On the whole, the work is the most comprehensi its kind that we know. No doubt a number of small books might written amplifying the detailed working of the departments we h referred to, but the great value of this work is that it counteracts evils which attend this very isolation of subjects and departme Given a general and well connected scheme, any competent indivi should be able to fill in the details peculiar to his requirements. this reason the letterpress from the first to the last of its 500 p practically leaves nothing to be desired.

It may be mentioned that the author has made arrangement supply all the special rulings for forms and books, through publishers.

The Patent List.

is list is compiled from Official sources in the Manchester ical Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

PPLICATIONS FOR ENGLISH LETTERS PATENT.

vements in Soap, etc. C. Bauer. 25,050. November 9.
ined Lead Pipes. A. Barraclough. 25,074. November 9.
ing Crude Acetic Acid. A. Schmidt. 25,100. November 9.
facture of White Lead Pigment and Separation of Metallic ad from Lead Sulphide. A. Macdonald. 25,133. November 9.
ss for Impregnating Fibrous Substances such as Wood-peat. P. Thompson. 25,240. November 10.
ting Ores, etc., to the Action of Gases or Liquids. W. E. Pedley. 250. November 10.
ted Table Salt. T. J. Vick and C. C. Askew. 25,273. November 11.
vements in the Manufacture of Gas and Coke. T. B. Younger. 339. November 11.
ing Wool Hairs and other Fibres, and Recovering Grease from Suds. A. J. Inston and E. Ramsden. 25,340. November 11.
ering Zinc, etc., from Zinc Ores. S. O. Cowper-Coles. 25,375. vember 11.
ering Gold from "Slimes." S. O. Cowper-Coles. 25,377. Nov. 11.
facture of White Arsenic. W. Bevan. 25,377. November 11.
vements in Gas-fired Kilns. H. Heather. 25,428. November 12.
ng Ramie Fibre in the Fresh State. W. T. Forbes. 25,486. Nov 12.
nd Improved Anti-fouling Paint. E. Scott. 25,549. November 13.
ved Dyeing Liquid, Detergent and Disinfectant. C. W. Anderson, H. B. and J. Mendess. 25,592. November 13.
d and Apparatus for the Manufacture of Calcium Carbide and the duction of Metals from their Oxides. H. Maxim. 25,511. Nov. 13.
olytic Production of Chlorates of Sodium and Potassium. T. rker. 25,631. November 14.
facture of Explosive Compounds. A. E. Pike and W. H. Thew. 704. November 14.
atus for Carbonizing Rags. B. H. Scheibler. 25,708. November 14.

STRACTS OF LATEST COMPLETE SPECIFICATIONS.

se abstracts are specially prepared for the Chemical Trade Journal, LL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the*

vements in or connected with the Manufacture of Sodium and tassium. J. A. Kendall, 11, Bournevale-road, Streatham. Eng. Pat. 045. December 2, 1895.

s is an improved form of retort for obtaining potassium or sodium decomposition of the fused carbonate or hydrate with carbon at temperature. A cylindrical retort of nickel, set at a slight incline ovided with an outlet pipe to carry off the vapour of the metal as , is surrounded by a larger retort made of iron and protected by fire- other suitable covering from the direct heat of the furnace, in which ole is set. The annular space between the two retorts is filled with gen gas, the presence of which protects the nickel retort during ocess. A funnel of platinum is provided for supplying fresh alkali to the retort from a suitable fusing kettle. There is one

atus for Treating Solid and Pasty Substances with Gases at evated Temperatures. L. Mond, 20, Avenue-road, Regent's Park, ndon. Eng. Pat. 23,665A. December 10, 1895.

fully appreciate the claims of this patent it is necessary to study ve drawings which accompany the specification. Briefly, the atus may be described as follows :—The vertical reaction chamber ndrical, and made up of a number of cast-iron sections. It is led with a central revolving shaft which carries stirring arms. of the sections is divided into three compartments by two s, the upper one having openings at its periphery and the lower the centre, thus leaving a space between it and the central shaft. hird compartment, formed by the lower shelf and the division which separates the next section, is heated by flue gases. Two l flues are carried up parallel with the reaction chamber; one ys hot gases from a producer or furnace, and the other goes to the ey. Short flues connect these with the compartment in question, is divided by a radial partition, thus compelling the gases to round the compartment before they can escape to the chimney The revolving stirring arms are so constructed that they alter- move the material being treated to the edges and centres of the s.

Improvements in Electrodes for Electrolytical Purposes. W. Heraeus (of the firm of W. C. Heraeus), Hanau a/Maine, Germany. Eng. Pat. 1,144. January 16, 1896.

Platinum tubes are fitted with copper rods which support the platinum sheath. Care must be taken to properly close the tubes after the insertion of the conducting core so as to prevent the electrolyte entering the interior of the tubes. A number of such electrodes can be coupled together by a transverse conducting strip, so that with a strong inlet of current a large surface is obtained (c.f. Pat. 22,207, 1895. *C.T.J.* 493, p. 273.)

A Process and Apparatus for Effecting Electrolysis. F. W. Golby, 36, Chancery-lane, London, W.C. (communicated by O. Arlt, 13III, Salomonstrasse, Goerlitz, Germany). Eng. Pat. 15,129. July 8, 1896.

The distinctive feature of the cells is that they are constructed to work with fluid electrodes which flow through the electrolyte in such a way as to be divided into jets or sprays, projected in any desirable direction. Their flow is continuous so that the circuit is always closed. There are four drawings.

A Process of Obtaining Sebacic Acid from Wool or Fulling Grease. F. Sahlfeld, 30, Arndtstrasse, Hanover, Germany. Eng. Pat. 18,940. August 27, 1896.

The raw material is distilled with superheated steam at about 300°C. For this purpose an injector in the neck of the retort is employed, which delivers steam at the above temperature. The sebacic acid and the accompanying carburetted compounds are largely separated under the action of the injector by the aid of which the distillation is accelerated and a purer distillate obtained. There is one figure.

Improvements in or Connected with the Concentration of Sulphuric Acid. R. England, 36, Mark-lane, London. Eng. Pat. 22,715. November 27, 1895.

The hot acid flowing from the concentrators is cooled by weak (chamber) acid, which is thus in turn partially heated on its way to be concentrated. The steam and acid vapours given off from the concentrating vessels are also passed through coils, in tanks, through which cold acid is run, resulting in the dual advantage of condensing the vapours while heating the feeding acid.

Improvements in the Manufacture of Solidified Petroleum. M. Ekenberg, 3, Agnegatan, Stockholm, Sweden. Eng. Pat. 16,541. July 25, 1896.

An anhydrous, transparent, and homogeneously solidified petroleum can be prepared by adding 1 to 15% of the fatty acids of woolfat to petroleum, along with caustic alkali. The woolfat must be free from the fatty acids of glycerine fat. The chief advantage claimed for the product obtained by this procedure is that it is quite anhydrous.

Improvements in Sheep Dip Powder. W. O., T. O., O., and W. B. B. Quibell, Castlegate, Newark, Notts. Eng. Pat. 20,792. September 11, 1896.

The object is to produce a dipping compound which, while more or less dry, will not form into hard masses under pressure, or in the course of time. For this purpose about 100 parts of sulphur to 30 of arsenic, rendered soluble with alkali, are mixed with 5 parts of "spirits of tar." This well-known commercial product is defined in this instance as being that fraction of wood tar distillate which has a gravity of about 0·874, and of which some 85% distills between 155° and 185° C. The patentees do not bind themselves to this product however, but also claim rosin or creosote oils, and similar suitable substances.

AN OIL WORKS DESTROYED.—On Monday evening the Springfield Oil Works, Salford, belonging to Messrs. E. G. Cockerell and Co., were found to be on fire. An alarm of fire was raised about 7-20, and the fire brigade received information some few minutes later. They found on reaching the spot that the fire was raging fiercely in the boiler-house, and had already extended to the main building, a structure of two storeys high, measuring some 25 yards by 20. A number of jets of water were without delay brought to bear on the building, but owing to the inflammable nature of the contents, some thousands of gallons of oil being stored therein in casks and tanks, capable, some of them, of containing 1,600 gallons each, the efforts of the brigade did not at first appear to make much impression on the flames. About eight o'clock the roof fell in, and a great shower of sparks and fresh uprush of flame illuminated the neighbourhood with great vividness. It had become evident that the works were doomed to destruction, notwithstanding the remarkably strenuous exertions of every member of the brigade, and as sparks were falling thickly on adjoining property, which included a tarpaulin and a paper-box works, the brigade took speedy steps to prevent the spread of the flames. Although the precise origin of the outbreak has not been ascertained it is clear that it arose in the boiler-house, possibly from overheating.

Legal Intelligence.

HIGH COURT OF JUSTICE.

QUEEN'S BENCH DIVISION.

COMMERCIAL CAUSES.

(Before Mr. Justice Collins without a Jury.)

THE MAGNOLIA METAL COMPANY *v.* THE ATLAS METAL COMPANY (LIMITED), JOHN SUGDEN, MAX WAGNER, AND JOHN LULHAM POUND, THE ATLAS BRONZE COMPANY (LIMITED), AND A. G. BROWN.

This was an action by a company incorporated under the laws of West Virginia, U S A, claiming an injunction restraining the defendants from manufacturing or selling metal made up so as to represent Magnolia metal, or from using the word Magnolia in connection with metal resembling plaintiffs' Magnolia metal, or in connection with any anti-friction metal, or from using the plaintiffs' trade-mark and trade designs, or from selling such Magnolia metal in boxes made to represent the plaintiffs' metal, or from advertising for sale the said alleged Magnolia metal or any anti-friction metal as genuine Magnolia metal. The plaintiffs also claimed damages in respect of alleged spurious imitation of the goods by the defendants. The defendants Sugden, Wagner, and Pound, before June, 1896, were in partnership, and had a contract of March, 1891, with the plaintiff company, giving them the sole right to sell in England and Europe Magnolia metal manufactured by the plaintiff company. In February, 1894, it was contemplated that the English firm should form a company to be called the Magnolia Anti-Friction Company of Great Britain, and a new agreement was entered into in substitution of the agreement of March, 1891, whereby it was provided that the plaintiff company should sell, and the English company should purchase, 1,339 tons of Magnolia metal; that the American company should put the English company in possession of their formulæ, processes, discoveries, and inventions for manfacturing metallic packings and friction metals or bearing alloys, except the process of manufacturing Magnolia metal. The agreement also contained provisions for the termination of the agreement in certain events. In 1895 and beginning of 1896 disputes arose between the parties to the agreement, and the plaintiff company rescinded the agreement. An action was brought, and the plaintiff company was held to be justified in rescinding. During the dispute a Mr. Miller, on behalf of the plaintiff company, began to sell the plaintiffs' metal in England. An action was brought by the English firm to restrain his agents from so selling it in contravention of the contract of February, 1894, when it was decided that the English firm had lost their rights. At the time the English firm were under contracts to supply the metal, which the plaintiff company refused to supply. The English firm then, as it was alleged by the plaintiff company, contrived to imitate the plaintiffs' manufacture, and delivered 53 tons of ingots, marked "Magnolia Anti-Friction Metal" to their customers. Mr. Pound was ignorant of the steps taken by the English partnership, and immediately he took steps to have the partnership dissolved. It was conceded by counsel for the defendants that, with the exception of Pound, the defendants' conduct, in so far as they had sold goods in imitation of the plaintiffs, could not be justified, but they contended that the plaintiff company had suffered no damages. They further contended that no action for infringement of trade-marks would be—(1) because at the commencement of the action there were no trade-marks registered in the name of the plaintiff company, but that they were registered in the name of the Magnolia Anti-Friction Metal Company of New York; (2) that the device of a flower with "Magnolia Anti-Friction Metal" written over it was not a trade-mark capable of registration within c vi. of the Trade-Marks Act, 1888; that Magnolia was a geographical term, and there were 17 towns in America of that name; that there was no literary merit or anything original in the words "anti-friction metal;" and, lastly, that the trade-mark must be registered in connexion with a business, and the plaintiff company did not carry on any business in this country. The following are the trade-marks:—(1) a device of a magnolia flower simply; (2) the word "Magnolia," with the device of a flower and "Anti-Friction Metal" written below; (3) the word "Magnolia" simply.

Mr. Justice Collins in giving judgment said:—The action of the English firm in contriving to imitate the plaintiffs' metal and deliver it to their customers was open to condemnation. That action involved the defendants Sugden, Wagner, and Brown. Upon that part of the case it was a clear case of common law fraud. After the case had been conducted on that footing up to the end of the summing up of defendants' counsel, the plaintiffs set up a case based upon three different trade-marks. There was one short and sufficient answer to the case. The plaintiffs were not at the present moment on the register as owners of any one of the trade-marks. With regard to the first two of the trade-marks, if an application had been made to him to have them removed from the register he would have had them removed. That might not affect the mark of a flower alone, but as to that the plain were not the registered owners. Magnolia was a geographical n there being several towns of that name in America. He did not that the plaintiffs' goods were properly classified as machinery parts of machinery under Class 6 of the Trade-Marks Acts, 1883-1 He had to deal with the case stripped of any question of regist of trade-marks. He had pointed out, and it was common gro that an injunction must go to prevent the defendants from counterfe plaintiffs' metal. The plaintiffs relied on the contention that the word Magnolia must be taken to signify a manufacture by the plain He came to the conclusion that Magnolia was a peculiar alloy, bu name did not mean to carry with it that it was the make of a parti manufacturer. He had no hesitation in saying that Magnolia me metal, and not the manufacture of a particular person. If he was in saying that Magnolia was a particular alloy, and that there wa trade-mark or patent, there was nothing to prevent others from m facturing it; but no person would be justified in manufacturi without taking steps to distinguish it from the plaintiffs' manufac The plaintiffs were not entitled to the exclusive use of the word nolia. With regard to damages, he did not think Mr. Miller into court altogether with clean hands, and he would not stretch law in his favour if he had resorted to contrivances to filch awa business of the defendants. But the plaintiffs were entitled t damages which the law allowed. The damages were put unde heads—(1) profit on the 53 tons of spurious metal sold by the de ants which the plaintiffs would have sold; (2) the passing spurious metal as that of plaintiffs, and thereby damaging their ness. As to the first, the plaintiffs had contracted not to sell any in England. They traded through nominees, and could not now damages as if they had been the real sellers. The plaintiffs ha shown that they would have sold any more if the defendants ha put their stuffs on the market. With regard to the second hea was not satisfied that the defendants' metal was of inferior qu Experts had said that the two kinds sold were the same. As t defendant Pound, the action against him must be dismissed with as the acts of his partners were not within the scope of the partne and he was not bound by their acts. As to the other defendants would be an injunction with costs up to the time of the admissio defendants' counsel. The costs of the action after that to be pa the plaintiffs.

Judgment for an injunction in the terms indicated.

Reports of Companies.

MESSRS. A. M. PEEBLES AND SON, LIMITED.

The statutory general meeting of the shareholders of A. M. Pe and Son, Limited, was held last week at Cannon-street Hotel, J. A. Walter (the chairman of the company) presiding.

The Chairman said: As you are aware this is only the stat meeting, and I am afraid it will not be of great interest to you, w have no dividend to declare and no accounts to present; but it i law, and we have to comply with it by holding this meeting. As know, we had our allotment and applications about four months and the applications were very largely in excess. But we thoug right to give everybody something, and we would not issue a l letter of regret. I do not suppose that there is any company, what I have been told, that has had such a speedy settlement gra to it by the Stock Exchange as ours, and, as you will see by the press, our shares stand at a very fair amount above the par value. promotion money was paid whatever, and, of course, we have h very great compliment paid us by the Bank of England being our bankers. As for the business itself, we see no reason to doubt it is going on in a satisfactory manner. The directors paid a visit to the mills a little time ago. I have been a paper-maker m for nearly twenty-five years, so I ought to know something paper-making, and I must confess I was very much pleased with I saw at Rishton and Whiteash. It struck me that there were rem ably few men about for the amount of paper that was turned out. mills seemed to me in excellent order, and I would say here that were a large number of new beaters being put in—not at the e the company, but at the cost of Mr. Peebles' executors. I sh indeed, like to thank the executors very much for the liberal generous way in which they have treated us all through. I think have treated us most liberally in every way. They have spent a siderable amount of money on the offices in London, and they paid for it themselves, although I thought the company might have been called upon to pay; but they have defrayed it entirel of their own pockets. The business is being quite maintaine course there are ups and down in paper-making as well as in every business, but we are very well satisfied with the way the busin being conducted, and of the amount doing. We are working

lay, and turning out an enormous amount of paper, and I am glad y also that we sell an enormous quantity. So far as contracts are rned we have made very good contracts for chemicals. Some s are up and some are down ; but, on the whole, we are quite ied with the contracts we have made. I do not know that I have more to say, but if any shareholder has any question he would like : I shall be glad to answer it. I shall feel it my duty every now and to go down to the mills to see what is going on ; and I hope when ext meet, some time in February, we shall be able to declare a end then, and at the annual meeting in July I have no doubt we have a good account of the business to give you. As I have said hares keep up well in value, and I see no reason why they should ntinue to do so. After a brief discussion a vote of thanks to the man was moved.—The Chairman, in acknowledging the compli- said he had perfect faith in the company himself. He knew paper-making was—at any rate he ought to do—and he had never more pleased with any mill than he had been with the two mills ging to the company.

SOCIETY OF CHEMICAL INDUSTRY.

SCOTTISH SECTION.

E first meeting of the new session 1896-97 was held on the even- ing of Tuesday, November 24th, in the Chemistry Class-room of lasgow Technical College (Andersonian University), East George- The Chairman of the Section, Dr. John Clark, F.I.C., con- l the proceedings. Hitherto the meetings have been held on the uesday of the month, and the place of meeting (for Glasgow) has s been in the building of the Glasgow Philosophical Society, street, in another, and perhaps a more convenient part of the city. Chairman referred to this, and explained that the change had out of the initiative of the managing committee of the Society, lesired the date of meeting to be shifted from the first Tuesday to st Tuesday, the latter having been decided on as a more con- it date with a view to preparing the papers when read for publica- the Journal of the Society with the least possible delay. It was fter having fully acceded to this request, and arranged the dates Sessions' meetings for both Glasgow and Edinburgh, that the sh Committee ascertained that the new Glasgow dates would not with the engagements already generally entered into by the w Philosophical Society for the letting of their meeting er. Therefore, a change of quarters became necessary ; the e-street premises had been selected, and the Chairman hoped that ection would find itself comfortable here. After this explanatory ent, and the reading of the minutes of the closing meeting of last , Dr. John Clark, F.I.C., read a brief paper on the "Estima- Nickel and Zinc as Phosphate," in which were detailed the of a series of experiments carried on by the author over a con- le period of time, reference being made to the initiative (or tion) of the late Professor Dittmar within the same walk of h. Mr. R. T. Thomson, F.I.C., analytical chemist (of Messrs. Tatlock, Readman, and Thomson) followed with a paper (also erate length only) on "The Determination of Iron and Alumina in l Phosphates." This paper, he said, was a sequel or supple- to one he read before the Section eleven years ago, and was on experiments engaged in subsequently to that reading. It chiefly on the neutralisation process, and after explaining the of his procedure, he claimed for the process advantages which no ossessed. Professor Henderson spoke to both of these readings, oved a vote of thanks in each case. The closing item was a paper y the hon. secretary, entitled "Gold Milling at Ballarat," by Mr. ton M. Wingate, a class of subject always of high interest to hemists, and especially just at present, in consequence of the verdict in the High Court of Pretoria (Transvaal), on the thur-Forrest cyanide patents.

E AT A CANDLE WORKS.—There was a remarkable scene at a ich broke out on Friday last week at the candle manufactory of . Whitley, Chesterton, near Yarmouth. The fire broke out in nery through the overheating of a flue. Almost instantly the of the buildings became enveloped in flames. Hundreds of tons and other substances used in the manufacture of candles melted wed in blazing streams over all the gardens and grounds in the . Trenches were dug by the firemen in order to stop the flow, being altogether useless. The trenches, however, soon filled up, e molten material was once more in full flow. All around the a for a distance of a hundred yards there was a thick incrustation upon the ground. In the end the torrent was arrested by the n of huge banks of earth and turf. By Saturday morning the of the premises were destroyed. The damage is estimated at , and is partially covered by insurance. The glare from the buildings so lighted up the sky that policemen came to assist istances of ten to twenty miles.

ENGLISH AND AMERICAN PATENT FEES.

IN a letter comparing the relative costs of patents in this country and the United States, written by a correspondent, to the "Manchester Guardian," the writer gives the following figures to show how inventive genius is handicapped in England, to the industrial detriment of the country. In the 1896 American Official Patent Report there can be found the names of 25 American inventors each of whom during the last 25 years (1870 to 1895 inclusive) took out over 100 patents. This high figure indicates a degree of matured invention induced by repeated successes entirely unknown in this country. The following table, based on the above, shows—(1) the number of 17-year valid American patents taken out by each inventor ; (2) the name of each American inventor ; (3) the amount of Government fees each paid for their patents; (4) the amount of Government fees each would have been required to pay for a similar number of one-seventh valid 14-year patents in this country ; (5) the preposterous and needless overcharge on our patents, which renders matured invention an impossibility in this country :—

1. No. of patents.	2. Names.	3. American fees. £	4. British. fees. £	5. Attempted overcharge. £
101	G. H. Reynolds	707	15,935	15,228
107	P. C. Dedrick	749	16,881	16,132
109	W. Scott	763	17,197	16,434
111	S. H. Short	777	17,512	16,735
116	E. J. Brooks	812	18,301	17,489
118	W. N. Whiteley	826	18,616	17,790
119	L. H. Nash	833	18,775	17,942
125	En. Norton	875	19,721	18,846
128	G. O. Burton	896	20,195	19,299
131	A. S. Maxim	917	20,668	19,751
131	Ls. Goddu	917	20,668	19,751
144	A. J. Moxham	1,008	22,719	21,711
144	F. F. Raymond, Lmtd.	1,008	22,719	21,711
147	L. C. Crowell	1,029	23,192	22,163
148	C. W. Saladee	1,036	23,350	22,314
158	Rf. Eickemeyer	1,106	24,928	23,822
198	J. W. Hyatt	1,386	31,238	29,852
217	Geo. Westinghouse, jun.	1,519	34,236	32,717
228	R. M. Hunter	1,596	35,972	34,376
244	C. J. Van Depoele	1,708	38,496	36,788
248	C. E. Schreibner	1,736	39,127	37,391
274	Ed. Weston	1,918	43,229	41,311
343	F. H. Richards	2,401	54,115	51,714
394	Eu. Thompson	2,758	62,161	59,403
711	T. A. Edison	4,977	112,174	107,197
4,894		£34,258	£772,125	£737,867

Had these eminent inventors begun patenting in this country instead of in America they would quickly and inevitably have been turned aside from further inventive efforts by the fatal and disastrous cast of our mediæval patent laws. Where, then, would have been those invaluable contributions to civilisation which have made their names famous?

While the fruit of the American patent law is such as this, how much longer are we going to endure the paralysing folly, fraud, and extortion of our present system? Is it not a matter of considerable public interest to amend it in the direction of the only patent law in existence which can possibly foster those matured inventions so much needed to keep our manufacturing industries scientifically to the front? After all, the Treasury only gets 0.008 per cent., or one 1,200th part of its general revenue from its taxes on patents, and would make a hundred times more in the way of indirect taxation if it would allow invention to make trade prosperous and in a condition to defy foreign competition.

A NATIONAL CHAMBER OF TRADES.—The Hull and District Chamber of Trades request us to give publicity to the following :—Steps are being taken to form a Preliminary Committee for the purpose of making arrangements for holding a General Conference on Trade Combination with a view to the formation of a National Chamber of Trades. It is proposed that this committee shall meet in Leeds in the early part of January, and trade associations throughout the country are invited to communicate with the undersigned as early as possible. It is suggested that local conferences be held and delegates elected, but officials of associations are invited to forward their suggestions forthwith in order to assist the Preliminary Committee. Any representative willing to act upon this committee are also requested to notify to Mr. J. Walker Clark, president of Drapers' Association, Halifax ; Mr. G. R. Stokes, secretary of the Traders' Association, Hanley ; or with Mr. S. T. Nicholson, secretary of Hull and District Chamber of Trades.

Correspondence.

***We do not hold ourselves responsible for the opinions expressed by our correspondents.*

THE PREVENTION OF GASEOUS POISONING.

(To the Editor of the Chemical Trade Journal)

SIR,—With reference to the article printed in your journal of October 24th, on the "Prevention and Treatment of Gaseous Poisoning," our Mr. J. E Riley was so much impressed with the importance of the matter that he at once ordered several of your printed instructions for posting in various positions in the works. In addition to this, complete sets of the Preventive and Rescuing Appliances have been obtained, and are now placed in such positions that they can be had at any hour of the day. We feel that a very forward step has been made towards the prevention of serious accidents through Gassing, and that thanks are due to you for bringing the matter forward so prominently.—Yours truly,

p.pro J. RILEY AND SONS,
FRANK H. ENGLISH.

Trade Notes.

SOCIETY OF CHEMICAL INDUSTRY: *Liverpool Section*—The next meeting of this section will be held on Wednesday, December 2nd, at seven p m, in the Theatre of the Chemical Laboratories, University College, when the following papers will be read:—1 "Rescue Apparatus for Use Among Noxious Gases," by A Carey, M.Sc; 2. "Notes on Poisoning by Carbonic Oxide," by Douglas Herman, F.I.C Among certain other miscellaneous communications there will also be read a note on "A Substitute for Tartaric Acid in the Preparation of Effervescent Beverages," by Douglas Herman, F.I.C., and a note on "The Use of Thioacetic Acid in Qualitative Analysis," by W A Caspari, B Sc.

SOCIETY OF CHEMICAL INDUSTRY: *Manchester Section.*—The second meeting of this section will take place on Friday, December 4th, at 7 p.m., at the Victoria Hotel, in the rooms of the Chemical Club, when the following papers will be read:—"Safe and unsafe mineral oils for lighting and heating purposes, with practical suggestions for the treatment of unsafe oils; also observations on oil lamps and oil stoves," by Stevenson Macadam, Ph.D., F.R.S.E., and "Contributions to the analysis of fats," by J. Lewkowitsch, Ph.D., F.I.C., etc.

SMART FINE FOR DILUTING BEER.—At the West Ham Police Court, last week, Henry Bywater, the landlord of the Railway Tavern, Victoria Dock-road, was summoned by the Inland Revenue authorities for diluting beer. Mr. G H. Denniss prosecuted, and Mr. Maitland defended. The case for the prosecution was that, on July 20th, Mr. T. Baker, a revenue officer, with two colleagues, visited the defendant's cellars and took samples from two casks bearing the same mark, one being fined and the other unfined. The potman, George Whittall, was present, and he told the officers that when fining the one cask he put in four gallons of waste and two gallons of "bottom" in addition to ¾ gallon of finings. The beer left the brewery with a gravity of 1057, but the analysts at Somerset House certified the gravity of the unfined sample as 1055·62, and that of the fined sample as 1041·74. Taking the standard of the gravity of unfined beer as 1057·62, it was therefore certified that the fined beer had been diluted with the equivalent of two gallons of water in the barrel of 36 gallons.—Mr. Maitland called a number of witnesses to prove that the dilution of beer happened accidentally. On the night of July 18th the bar was left as usual, but at nine o'clock next morning it was found that the tap over the glass washing basin had not been turned off overnight, and when the water supply was restored the water flooded the bar. Some had flowed into the sink beneath the beer engines, and had run into a bucket in the cellar reserved for the waste. The potman later on went down to fine a hogshead of four-ale, and, as was his custom, he put into the hogshead the waste from the bucket beneath the pipe, being unaware that water had gone into it. He noticed that the waste was lighter than usual and pulled the funnel out of the hogshead, but too late. The question was, said Mr. Maitland, did the defendant, in the words of the summons, dilute certain beer—did the potman wilfully, and intentionally meaning so to do, dilute the beer? If he did not, then the defendant ought not to be held responsible. What really happened was the result of an accident. Mr. Baggallay said the question was, was it a pure accident or not? Mr. G. H. Dennis observed that the Act allowed finings to be added, but here it was admitted that waste was added. This was not allowed, so the question as to whether the waste was diluted or not was of no consequence. Mr. Baggallay: The defence is ingenious; but I am quite satisfied it was done on purpose. There will be a fine of £25 and costs.

A COLOUR WORKS BURNT.—A destructive fire occurr Flinders Lane, Melbourne, on Sunday last. The clothing fact Beach, Schiess, and Co, and the premises of William Dean an oil and colour merchants, and of Richard Allen and Co, soft merchants, were gutted. The damage is about £100,000.

THE WAGES OF NORTHWICH FITTERS AND BLACKSMITH the result of an interview with Sir John Brunner and Mr. Ja directors of Messrs. Brunner, Mond, and Co, chemical manufact an important concession has been made to the fitters, blacksmith strikers in the employment of that firm at Northwich Fro present until the beginning of January they are to receive an inc wage of one shilling weekly, and after January a further shill promised. When the latter rate commences the fitters and smith be in receipt of 36s. weekly, and the strikers 24s.

A NEW PROSPECT FOR RÖNTGEN RAYS.—According to Am advices, Mr Edison has made a remarkable statement to the effec by the use of the Röntgen rays the blind may be able to see, th condition being that the optic nerve must be intact. Experiment been made at his laboratory, apparently to some extent succes Certain conditions of the eye and optic nerve are of course ess and as the whole affair is very much in the experimental stag important that the superlative desirability of the idea should n allowed to dwarf the fact that at present it is of a speculative than scientific nature.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are weaker, with 90's at 4s. and 50/90's at 3s., p These prices, however, are virtually nominal, as there is hardly e business doing to test the market. The forward position is undou weaker, though carbolic acids are firm, especially 60% crude, wh now quoted 2s. 1d; crystals, 40%, are unchanged at 7½d. Naf are about the same, with crude at 1s 3d. and solvent 1s 7d. Pi uncertain, and prices vary a good deal according to locality. pric quoted ranging from 26s to 30s. 6d., f.o.b East Coast

Sulphate of ammonia is down again. In certain sections o market the makers are firm, but the parcels of second hand stu offer tend to weaken the tone of the market as a whole There better inquiry from consumers, but they want things all their own Nearest values are:—Beckton £8, London outside makes £7. 17s Liverpool £7. 15s, Hull £7. 12s 6d. to £7. 13s. 9d, and £7. 11s 3d. to £7. 12s. 6d, all prompt.

MISCELLANEOUS CHEMICAL MARKET.

There is little change to report in the position of the staple pro of the alkali trade Demand is fairly active for export (especial the United States) for caustic soda, bleaching powder, &c. P have undergone no material alteration. In higher strengths of ca soda, however, higher prices are asked, but current quotations sta last week, viz.:—f.o.b. Liverpool, 77%, £9; 74%, £8.; 70%, £7 6d.; 60%, £6. 2s. 6d. per ton, 10-ton lots and upwards. Illese powder continues active. Softwoods, on rails, £6 10s; and h woods, f.o.b., £6. 15s per ton. Chlorate of potash, 4d; soda, per lb. Ammonia alkali steady, at £3. 5s. to £3 7s. 6d per to prompt and forward delivery Saltcake steady, and with up tendency, at 19s to 20s per ton. Recovered sulphur firmer at 15s. f.o.r. In vitriol and muriatic acids there are no change report, and considerable business has been done over 1897. Pot caustic and carbonate, is in good demand for spot delivery, and prices are obtained. For brown acetate of lime the higher pri maintained for spot delivery, and is firmer for forward. Sulphate of co is firm at £16. 15s to £17. f.o.b., while powdered arsenic is in st demand at £23. prompt delivery, and £24. for January-March. aniline oil and salt there is only little spot business doing, and pr are maintained. Carbolic acids are dearer and firm. Muriat ammonia is offering at slightly lower rates for forward deliv Prussiate of potash 5½d. to 5¾. per lb. Soda, 4½d. per lb. Cyan 11½d. to 1s. per lb. In general chemicals there is only little acti and no material improvement in values can yet be recorded.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed 48s. 11d., Middlesbrough 40s. 10d. cash, and hematite 50s. 11 Copper, firm: Chili bars, G. O. B.'s and G. M. B's., closed £49. 1s. 3d. to £49. 6s. 3d. cash, and £49. 13s 9d. to £49 18s. three months. Tin, steady: Straits closed at £58. 7s. 6d. £58. 17s. 6d. cash, and £59. 5s. to £59. 15s. three mont Australian, £60. 5s; English ingots, £63. 5s. Lead, firm; Spani £11. 13s. 9d. to £11. 15s.; English, £11. 17s. 6d. Silesian spel

, £17. 15s. to £17. 17s. 6d. Nickel 1s. 2½d. Antimony s. to £30. Quicksilver: First hands, £6 12s. 6d.; second £6. 11s. 6d. *Copper shares*, steady: Cape, 2 7/16 to 2 9/16; , 1 13/16 to 1 15/16; Libiola, 1 15/16 to 2 1/16; Mason and Barry, 3 to Rio Tinto, 24 15/16 to 25 1/16; Tharsis, 5⅞ to 6⅛.

SGOW, WEDNESDAY.—Market strong, and a good business. done at 48s. 9½d. and 48s. 11½d. cash; also at 49s. 1½d., d 49s. 1½d. one month; buyers, 48s. 11d. cash. Cleveland 40s. 8½d. and 40s. 9d cash; buyers, 40s 10d. cash; sellers re. Cumberland hematite done at 50s. 9½d. and 51s cash; 51s 2½d. one month; buyers, 50s. 11½d cash; sellers 51s. Brough hematite done at 49s. cash, and 49s 2d to 49s. 3d. one buyers, 49s cash.

VERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

.—Palm oil is very quiet, and there is only a small business soft oils at £19. 2s. 6d., ex quay, and Lagos at £22. per ton Olive keeps steady and in fairly good request. Linseed is l and prices lower, Liverpool makes, in export casks, now being 16s 9d. to 18s. 6d. per cwt. Cottonseed continues quiet and Liverpool refined being now at 16s 3d. to 16s. 9d; American ed at 18s. per cwt. Castor oil keeps very steady, sellers asking ot for good seconds Calcutta, while first pressure French is offer- ⅞d to 3⅝d.; business is rather restricted accordingly. Tallow , with no sales to report. Resin is in moderate request at full olders remaining firm. Spirits of turpentine are a little easier, now moving off quietly at 21s. 3d. per cwt. Petroleum very ut quiet, with American 6⅜d. to 7¾d., and Russian refined 5⅞d. per gallon.

OURS.—Prices are steady, and practically without change, Oxfordshire, common, £10., medium, £12., best, £15. ire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, conds, 50s., and common, 18s.; Irish, Devonshire, 40s. to rench, J.C., 65s. Umber: 40s. to 45s. White lead, £16. d unchanged. Venetian red, £6. to £10. Cobalt: Pre- xide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, edium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

REPORT ON MANURE MATERIAL.

market has resumed a quieter tone, there being now rather han buyers at prices that were recently paid. Quotations for phosphates a e unchanged, but buyers don't come forward at es, although there is a fair amount of enquiry. Business has ne at some concession, both for high grade and 60%. Sellers of , however, are firm at 5¼d per unit for 58/63%, and at 5½d. 0%, and business has recently been done in the latter grade at er unit. The position of River Plate bones is unchanged, and bsence of cargoes offering £3. 17s. 6d. per ton must be con- as about the value. Crushed Kurrachee bones offer for ship- t £4. per ton without finding buyers. There are sellers of bone meal, afloat and for shipment, at £3. 18s. 9d. per ton, e would not now be buyers at over £3. 17s. 6d. per ton. Nitrate is steady on spot at 8s. per cwt. for fine quality. Due cargoes nd such a ready sale as they did recently, and the value of quality cannot be put at over 7s. 9d. per cwt.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

week's signs of better business proved delusive, and the position s that of a depressed market. Prices, however, are not as yet openly, being nominally maintained at late figures, chiefly in of the restricted production over the chemical field generally. overy in sulphate of ammonia spent itself fully in the early por- ast week, almost immediately after the despatch of report, and cle has been on the down grade again since, though not reck- o. Figures to-day are from £7. 10s. to £7. 12s. 6d. prompt he deferred delivery section being again back to the old blank n While the brief boom lasted, a fair bulk of forward busi- s done at prices which makers may now regard with some of complacency. The only new feature in the mineral oil and section is the increased firmness in lubricating oils, especially 65°, which is in stronger demand, and not unlikely to rise.

prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; h, 48/52°, £4. 2s. 6d. to £4. 7s. 6d. nett, Tyne; white alkali, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. lasgow; caustic soda, white, 74° £8., 70/72° £7. 5s, 60/62° ., and cream 60/62° £6., all nett, Liverpool; bleaching , £6. 12s. 6d. nett, Tyne; saltcake, 20s.; borax, English, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s.; sulphate of ammonia, £7. 10s. to £7. 15s. prompt, f.o.b. Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £17. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1⅞d. per lb.; paraffin wax, 120° semi-refined, 1 15/16d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. Week's imports of sugar at Greenock were nil.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The demand appears to lag a good deal behind what was anticipated, especially in cotton oils, which as a consequence continually shows diminishing value. Linseed oil also continues to fall, with continued increased imports of seed. The imports during the week have been 2,677 tons of cottonseed from Alexandria, and 52 964 quarters of linseed, viz.:— From St. Petersburg, 20,086 quarters; from Riga, 8,760 quarters; from Odessa, 6,380 quarters; from New York, 6,340 quarters; from Pernau, 3,900 quarters; from Catania, 390 quarters; and from Konigsberg, 252 quarters. Refined cotton oil 10s. per ton lower, closing steady at 13s 9d. per cwt. naked spot; December-April offer at 14s. 1½d. Casks, £1., and ordinary barrels 30s. per ton extra. Export for week ending has been 4,260 cwts. Linseed oil again lower by about 5s. per ton, closing with sellers at 14s. 7½d. per cwt. naked spot December, 14s. 9d.; January-April, 15s 6d.; and May-August, 15s. 9d. Boiled and refined, £1. to £2. per ton extra. Export for week has been 1,200 cwts. Castor oil firm at 3¾d. per lb. for first pressure. Turpentine 21s. 6d. per cwt. Olive oils unchanged. Cod oils from £16 to £18. per ton. Bone grease remains firm at £16 15s. per ton. Oleines, 94% to 97% fatty acids: White, £19. 5s; pale, £18.; brown, £16 15s. per ton, c.i.f. Hull. Olive oil soap (Italian), 60% fatty acids, £16. 15s. per ton, c.i.f. Hull. Yorkshire brown grease, £8 per ton.

CAKES.—Linseed cakes quiet; 95% pure, £6. 7s. 6d. Oilcakes, £5. 7s. 6d. Cotton cakes dull: Best makes, spot, £4. 10s.; seconds, £4. 7s. 6d.; Dec.-April easy at £3 17s. 6d. The decline in maize is influencing the market. Rape cakes now offering.

PAINTS.—The demand is quiet, yet makers continue fairly well employed. Foreign white lead is offering at 16s. 6d. in 5 and 10 ton lots with a prospect of a further advance in prices. Dry mineral colours are unaltered. Oxide of iron, venetian red, yellow ochre, black, blue and green in oil firm, £11. per ton. Paint remover, 25s. to 30s. per cwt. Oak varnish from 5s. per gallon.

TYNE CHEMICAL REPORT.

TUESDAY.

Chemicals continue very dull and the demand limited. Soda crystals are £2. 2s 6d. per ton, gross weight, locally. Caustic soda, 76/77%, £9. to £9. 5s.; and 70%, £7. 10s. to £7. 15s. per ton. Sulphur scarce, at £5. per ton.

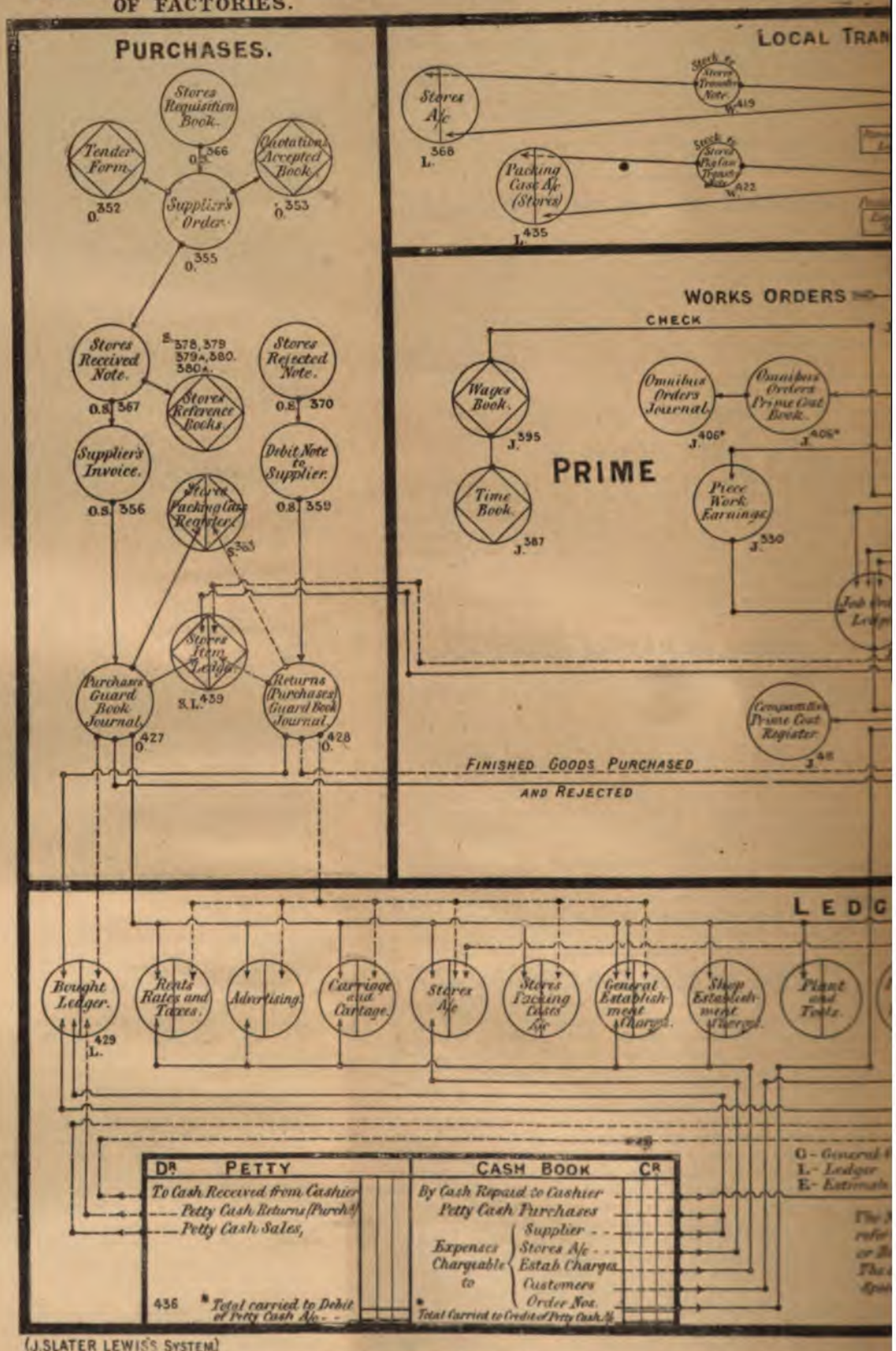
Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. per ton. nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do, 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s. 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. per ton, f.o.b. Tees.

COALS.—Coals are still quiet, and with the closing of Baltic ports shipments are falling off. Gas coals are in good demand. Coke is firm, and also in good demand locally. Prices; Best Northumbrian

THE COMMERCIAL ORGANISATION OF FACTORIES.

DIAGRAM OF



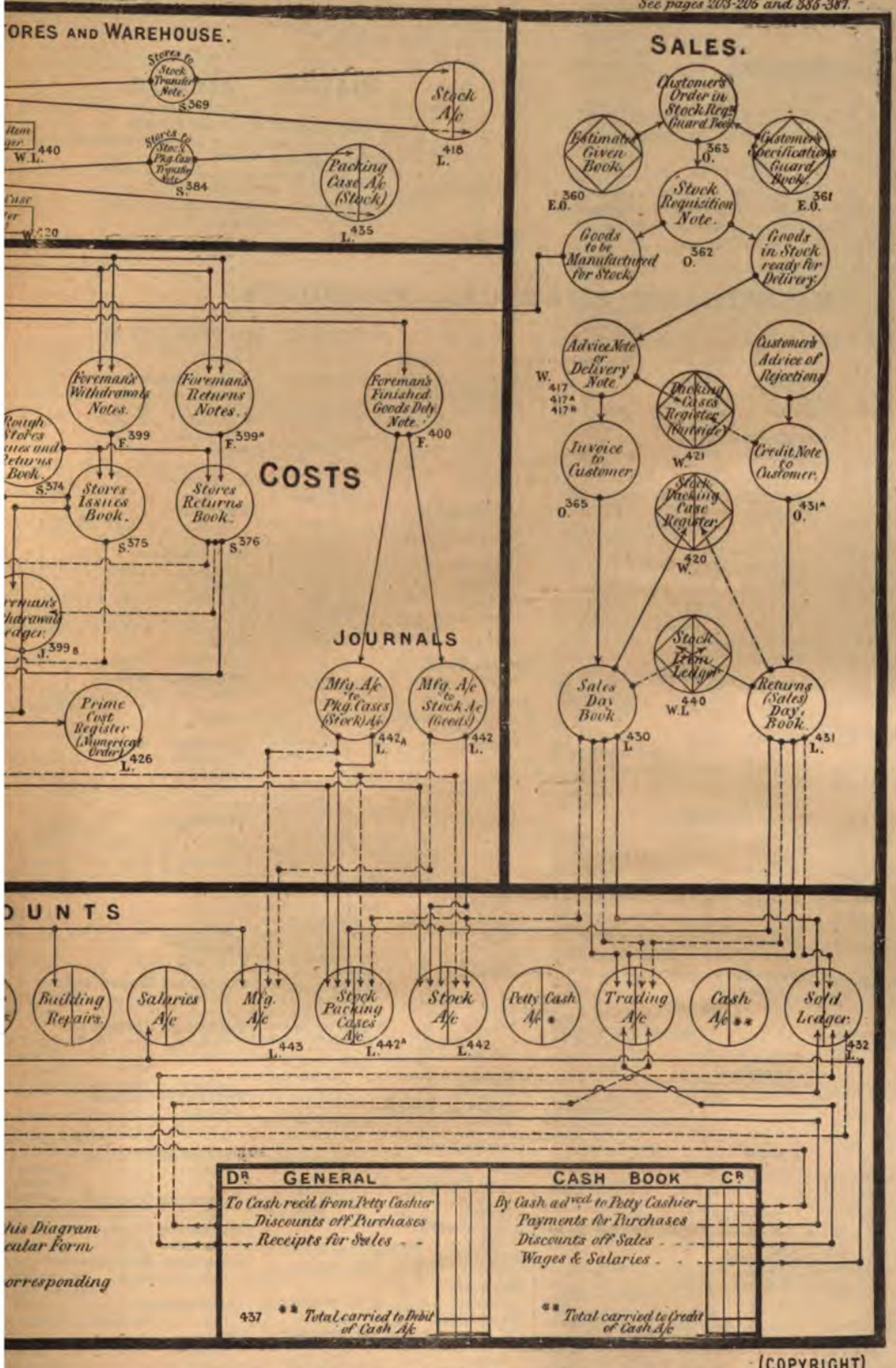
(J. SLATER LEWIS'S SYSTEM.)

BY SPECIAL PERMISSION OF THE PUBLISHERS.

ING ACCOUNTS.

DIAGRAM A.

See pages 203-205 and 385-387.


TORES AND WAREHOUSE.
Stores to Stock Transfer Note. S. 369
Stock A/c L. 418
Stores to Stock Pkg. Case Transfer Note. S. 384
Packing Case A/c (Stock) L. 435
W.L. 440
SALES.
Customer's Order in Stock Req. Guard Book
Estimates Given Book. E.O. 360
O. 363
Customer's Specifications Guard Book. E.O. 361
Stock Requisition Note. O. 362
Goods to be Manufactured for Stock.
Goods in Stock ready for Delivery.
Advice Note or Delivery Note. W. 417 417A 417B
Packing Cases Register Outside. W. 421
Customer's Advice of Rejections
Invoice to Customer. O. 365
Credit Note to Customer. O. 431A
Stock Packing Case Register. W. 420
Foreman's Withdrawals Notes. F. 399
Foremans Returns Notes. F. 399A
Foreman's Finished Goods Dely Note. F. 400
Rough Stores ues and eturns Book. S. 374
Stores Issues Book. S. 375
Stores Returns Book. S. 376
COSTS
Foreman's Withdrawals Ledger. J. 399B
Prime Cost Register (Numerical Order) L. 426
JOURNALS
Mfg. A/c to Pkg. Cases (Stock) A/c L. 442A
Mfg. A/c to Stock A/c (Goods) L. 442
Stock Trans. Ledger W.L. 440
Sales Day Book L. 430
Returns (Sales) Day Book L. 431
OUNTS
Building Repairs
Salaries A/c
Mfg. A/c L. 443
Stock Packing Cases A/c L. 442A
Stock A/c L. 442
Petty Cash A/c *
Trading A/c
Cash A/c **
Sold Ledger L. 432
his Diagram
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orresponding
Dr. GENERAL
To Cash recd. from Petty Cashier
Discounts off Purchases
Receipts for Sales
437 ** Total carried to Debit of Cash A/c
CASH BOOK Cr.
By Cash adv'd. to Petty Cashier
Payments for Purchases
Discounts off Sales
Wages & Salaries
** Total carried to Credit of Cash A/c

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(FOR LETTERPRESS SEE p. 336.)

steam, 7s. 3d. to 7s. 9d. per ton; second qualities, 6s 3d. to 6s. 9d. per ton; small steam, 3s. 6d. to 3s. 9d. per ton. Bunker coals, 6s 6d. to 7s per ton. Gas coals, 6s 9d. to 7s. per ton. Household coals, 10s. to 11s. per ton. Coke, 14s to 15s. per ton.

New Companies.

Groveland Soap Co., Ltd.—CAPITAL, £5,000., in shares of £1. each. This company has been formed to acquire and carry on the soap works of F. Gill at Tipton, Staffordshire.

J. Taylor and Co., Ltd.—CAPITAL, £45,000., in shares of £5. each. This company has been formed to acquire the business of dry-salters, etc, now carried on at Bolton and Radcliffe, by W. Bowker, as Joseph Taylor and Co. The subscribers to the memorandum of association are:—J. R. Ragdale, The Beeches, Shaw, Lancashire, bleacher; J. W. Allen, Bolton-road, Radcliffe, Lancashire, manufacturer; J. S. Bowker, Mill-street, Radcliffe, Lancashire, manufacturer; W. Skinner, Elms-street, Whitefield, Lancashire, surveyor; Bowker, Mill-street, Radcliffe, Lancashire, druggist; W. Nixon, Withnell-road, Blackpool, traveller; A Bentley, Fern Lea, Radcliffe, Lancashire, manufacturer.

Gazette Notices.

PARTNERSHIPS DISSOLVED.

W. HILL and E. J. PRENTISS, manufacturers of polishes and specialities, under the style of County Chemical Company, Coleshill.

S. J. HALL and W. T. JONES, colour manufacturers, Caldicot, near Chepstow, under the style of the Caldicot Colour Company.

BANKRUPTCY ACTS, 1883 and 1890.

Adjudication.

TATTERSFIELD, R., Mufield and Ravensthorpe, soap manufacturer and dyer.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 14th.

Acetate of Lime—
U. States, 1,307 bgs. R. E. Drummond
" 750 Lister & Biggs

Acetic Acid—
Holland, 70 pks. Beresford & Co.
" 145 Little & Johnston
" 20 cks. H. Wallace & Co.
" 24 Hernu, Peron & Co.
Belgium, 80 Reitmeyer & Co.
" 80 T. Ronaldson & Co.
Holland, 92 A. & M. Zimmermann

Acetone—
Austria, 15 drs. Thames S. T. & L. Co., Ld
Holland, 10 T. L. Lee

Alkali—
Belgium, 200 c. J. Harrison

Alum—
Holland, 183 cks. Ohlenschlager Brs.

Antimony Ore—
N Zealand, 19 t L. & I. D. Jt Co
France, 50 Novelli & Co.

Asbestos—
Italy, £265 Brit. Asbestos Co.
Holland, 15 Phillipps & Graves
Germany, 26 Craven & Co.
Italy, 160 Imperial Asbestos Co
Canada, 476 W. Byford
Italy, 525 Pickford & Co.
Germany, 85 J. Bock
France. 16 Girard Frs. & Co.
Italy, 18 London Asbestos Co.
Pt. E. Africa, 50 L. & I. D. Jt. Co

Barytes—
Germany, 1 ck. H. Lambert
Holland, 57 J. L. Lyon & Co.
Germany, 200 bgs. H. C. Everett
" 20 Moreton Cox Brs.
Holland, 77 W. Harrison & Co.
" 18 J. Owen

Calcium Hypophosphate—
Germany, 11 cs. F. Claydon & Co.

Caoutchouc—
Sweden, 20 c. M. D. Co.
Ceylon, 31 J. A. Hadden & Co.
U. States, 9 L. & I. D. Jt. Co.
Germany 86 "
Madagascar, 72 Major & Field
Belgium, 3 Société John Cockerill
Madagascar, 20 Hammond & Co.
France, 7 H. Johnson & Sons
Natal, 12 L. & I. D. Jt. Co.
Thursday Is., 2 Mellwraith & Co.
Rangoon, 17 Prop. Hay's Wf.
U. S. (Col.), 50 Stiebel Brs.
Germany, 17 T. H. Lee
Patras, 55 Prop. Bull Wf.

Castor Oil—
France, 50 cs. C. Windschuegl & Co.
" 30 brls. Beresford & Co.
Belgium, 12 A. Brown & Co.
Italy 20 A. & M. Zimmermann
France, 22 cks. Baiss Brs. & Co.
" 29 Lucas & Spencer's Wf., Ld.

Caustic Potash—
Germany, 2 drs. Domeier & Co.
France, 60 Petri Brs.
Canada, 8 Charles & Fox

Chemicals *(otherwise undescribed)*
Germany, £90 Fuerst Brs.
" 85 Phillipps & Graves
" 24 F. Stahlschmidt & Co.
U. States, 2,750 L. & I. D. Jt. Co.
Spain, 4 "
Germany, 38 "
" 90 H. Lambert
" 20 Stein Brs.
" 25 Hernu, Peron & Co.
Belgium, 17 O. Scholzig
" 312 Société John Cockerill
Germany, 147 T. H. Lee
" 662 A. & M. Zimmermann
" 3 W. J. Crook
Holland, 247 T. H. Lee
" 44 J. M. Steel & Co.
Germany, 6 cks. J. Wittenhagen
U. States, 855 F. Parker
Belgium, 5 T. H. Lee

Cream of Tartar—
France, 2 cks. McNamara & Co.
Spain, 10 B. & F. Wf. Co.
Holland, 40 kgs. Kirkpatrick & Co.
France, 5 M. Ashby, Ld.
" 5 W. C. Bacon & Co.
" 5 C. F. Gerhardt
Holland, 22 B. & F. Wf. Co.
Patras, 5 W. C. Bacon & Co.

Dyestuffs—
Argols
Italy, 429 bgs. Thames S. T. & L. Co.
" 49 pks. Fellows, Morton & Co.
Greece, 25 H. B. Attwater
Cochineal
Canaries, 34 bgs. W. M. Smith & Sons
" 61 Swanston & Co
" 4 J. W. Borland
" 6 Sperling & Williams
" 9 F. Huth & Co.
Cutch
Singapore, 200 bxs. H. Johnson & Sons
Rangoon, 765 A. Howden & Co.
" 200 Hoare, Wilson & Co.
Divi Divi
E. Indies, 34 bgs. Walker, Munsie & Co.
Extracts
Germany, 20 cks. A. J. Humphery
U. States, 50 bxs. W. Burton & Sons
" 100 Skilbeck Brs.
Austria, 100 brls. A. J. Humphery
Canada, 81 cks. Hoare, Wilson & Co
" 440 Boutcher, Mortimore & Co.
France, 40 200 bxs. T. H. Lee
Denmark, 9 cs. Sharland & Co
Gambier
Singapore, 93 bgs. Beresford & Co.
" 320 bls L. & I. D. Jt. Co.
Indigo
E. Indies, 13 chts. J. Hatton Hall & Co.
" 5 L. & I. D. Jt. Co.
Belgium, 1 "
" 1 Leach & Co.
Myraboiams
E. Indies. 4,062 bgs. W. Shelcott
Tanners' Bark
Natal. 5 t. Union L. Co.
Valonia
A. Turkey. 6 t. M. D. Co.

Farina—
Germany, 200 bgs. R. Bennett & Co.
" 50 Row, Saul, & Co.
Holland, 50 J. Knill & Co.

French Chalk—
Austria, £18 Taylor Brs.

Glucose—
Germany, 200 pks. 200 c. Trier, Meyer, & Co.
U. States, 50 300 Union L. Co.
" 500 500 Pearce, Pelly, & Co.
Germany, 25 202 Deering & Robottom
U. States, 500 500 Ohlenschlager Brs
" 488 2,684 Bellamy & Co.
" 500 500 Robinson, Son, & Co.
" 100 562 W. Balchin

Glue—
Germany, £30 Phillipps & Graves
Canada, 44 Pickford & Co.
France, 71 J. Harrison
Belgium, 198 J. Barber & Co.
U. States, 86 Armour & Co.
Holland, 35 Phillipps & Graves
" 59 H. Johnson & Sons
" 60 G. Rahn & Co.
Italy, 120 Lander & Knott
France, 83 Burnett Brs. & Sons
" 90 T. M. Duche & Sons
Belgium, 15 T. H. Lee
" 36 Becker & Wagner
Holland, 30 Carey & Sons
U. States, 10 L. P. D. Co.

Infusorial Earth—
Sydney, £70 L. & I. D. Jt. Co.

Insecticides—
Austria, 23 pks. City Coml. Wf.

Lamp Black—
U. States, 400 pks. L. & I. D. Jt. Co.
Sweden, 50 cs. M. D. Co.

Lead Acetate—
Germany, 5 cks. Petri Brs.

Litharge—
Holland, 3 cks. Perkins & Homer

Magnesia—
Holland, 10 cs. R. W. Greeff & Co.

Manganese—
U. States, 130 t. Williams, Torrey, & Co.
Germany, 10 c. Burrell & Co

Manure—
E. Indies, 300 Fox, Roy, & Co.

Methyl Alcohol—
France, 24 cks. A. H. Wi
" 9 J. H
Germany, 10 dms. St
U. States, 50 brls.

Mica—
E Indies, £310 W. M. Smith

Molasses—
U. States, 50 cks. 300 c. Bell

Naphtha—
Germany, 21 dms. Hagler, W

Nickel Salts—
Germany, 7 cks. Pe

Ochre—
Holland, 2 cks. M. Johnson
" 34 pks. Phillipps &
France, 40 cks. W. Harrison

Paint—
Germany, 1 cs. T. H

Phosphate Rock—
Belgium, 430 t. Anglo-Coml G.
" 203 Lawes Ch. Coml. M
France, 200 A. Hauser

Phosphoric Acid—
U. States, 150 bxs. Seaward

Pitch—
Russia, 300 brls. Fellows, M

Plumbago—
China, 224 cks Williams, T
Germany, 49 cs. E. & T.
" 10 J. Sinclair &
" 7 cks Fellows, M
" 54 B. Gall
Ceylon, 54 L. & I. D. J

Potash—
Canada, 157 c. Charles &

Potassium Bicarbonate—
Holland, 17 cks. A. & M. Zi

Potassium Carbonate—
Germany, 20 c. R. W. Greeff &
France, 100 Petri
" 200 Charles &
Belgium, 105 Petri

Potassium Chloride—
Holland, 30 cks. H. Johnson &
Germany, 308 bgs. 400 c. Be Waechter,

Potassium Cyanide—
Holland, 63 cs. G. Rahn &
" 40 P. Heyden

Potassium Oxalate—
Holland, 30 cks. R. W. Greeff &

Potassium Oxymuriate—
Sweden, 34 kgs. G. Rose &

Potassium Sulphate—
E. Indies, 164 bgs. G. H. Wi

Quicksilver—
Italy, 100 flasks. H. Rath &

Rosin—
Germany, 343 brls. F. & S. Chi
France, 14 brls. C. W. Sc
N. Russia, 200 J. G

Rosin Oil—
France, 200 brls. A. Brown & Co.
Saltpetre—
E. Indies, 1,122 bgs. Lucas & Spencer's Wf.
" 874 Blackwood, Bryson, & Co
" 604 Perkins & Homer
Germany, 30 cks. L. & I. D. Jt. Co.
Soda—
Belgium, 2,000 c. R. Waters
Holland, 200 R. W. Greeff & Co.
Belgium, 330 F. Claydon & Co.
Sodium Acetate—
Patras, 29 cks. J. Harrison
Starch—
Holland, 1,329 cs. Little & Johnston
Belgium, 200 T. H. Lee
Holland, 90 Phillipps & Graves
" 85 Hernu, Peron & Co.
" 270 E. & T. Pink
Belgium, 108 Leach & Co.
" 280 Taylor Brs.
Holland, 160 G. Rahn & Co.
" 125 T. H. Lee
Germany, 1,150 Horne & Co.
Belgium, 575 F. Claydon & Co.
" 300 E. & T. Pink
Germany, 37 J. Hall, junr., & Co.
Holland, 610 A. Starck
Stearine—
France, 137 bgs. H. Hill & Sons
" 100 H. Walbaum & Tosetti
Belgium, 63 C. S. Lovell
Tar—
N. Russia, 2,700 brls. W. F. Malcolm & Co.
" 190 Hoare, Marr, & Co.
Tar Salts—
Germany, 2 cs. T. Palmer
Tartaric Acid—
Holland, 14 cks. B. & F. Wf. Co.
" 6 F. C. Devon & Co.
Ultramarine—
Holland, 7 cs. J. Barber & Co.
Germany, 4 cks. Steinhoff, Sons, & Co.
" 10 pks. H. Brooks & Co.
Belgium, 2 brls. Leach & Co.
Varnish—
Germany, 15 pks. H. Lambert
France, 5 Mory & Co.
U. States, 52 Lunham & Moore
Verdigris—
France, 1 ck. B. & F. Wf. Co.
White Lead—
Holland, 20 cks. E. J. Diggins
Belgium, 40 J. L. Lyon & Co.
Holland, 12 Herrmann, Keller, & Co.
" 117 T. & W. Farmiloe
Belgium, 40 brls. Leach & Co.
Wood Pulp—
Sweden, 160 pks. Tough & Henderson
Germany, 100 W. G. Taylor & Co
" 615 E. J. & W. Goldsmith
" 400 W. Friedlander
" 42 W. D. Cork
Sweden, 74 M. D. Co.
" 180 bls. Christophersen & Co.
Germany, 34 pks. Thames S. T. & L. Co., Ltd.
Norway. 2,555 Moreton Cox, Brs.
Germany, 80 H. Lambert
Zinc Oxide—
Holland, 3 pks. Phillipps & Graves
" 102 brls. M. Ashby, Ltd.
" 55 J. Matton
U. States, 200 M. Ashby, Ltd.

LIVERPOOL.

Week ending November 12th.

Acetic Acid—
Rotterdam, 17 balloons
Alum—
Barcelona, 1 brl.
Antimony Ore—
Antofagasta, 1,260 bgs.
Asphaltum—
Bremen, 756 cs.
Barytes—
Rotterdam, 61 cks. 201 bgs.
Bone Meal—
Bombay, 2,000 bgs.
Boracic Acid—
Leghorn, 67 cks.
Castor Oil—
Marseilles, 6 pks. Rowland & Co.
" 30 brls.
Calcutta, 600 cs. Ralli Brs.
Caustic Potash—
Antwerp, 30 dms.
Caustic Soda—
Dunkirk, 21 dms.
Chemicals *(otherwise undescribed)*
Montreal, 7 brls.
Boston, 106 bxs. J. Cassel & Co.
Colours—
Antwerp, 6 cks.
Hamburg, 1 cs.
Cottonseed Oil—
New York, 100 brls.
Dyestuffs—
Argols
Leghorn, 2 cks.
Oporto, 56
Cochineal
Gd. Canary, 40 bgs. Kennedy & Moore
" 18 Sperling & Williams
Cutch
Hamburg, 4 cs.
Divi Divi
Hamburg, 300 bgs.
Fustic
Carthagena, 610 ps. G. H. Muller & Co
Tampico, 2,821 W. H. Thompson & Co.
Gambier
Singapore, 9,168 bls
Logwood
Lisbon, 8 ps.
Havre, 611 Cunard S. S. Co., Ld.
Hamburg, 50 cs.
Holbox (Yucatan) 13,655 quintals Chambers, Gultizee & Co.
Myrabolams
Bombay, 2,477 bgs. D. Sassoon & Co.
Antwerp, 1
Saffron
Valencia, 6 cs.
Shumac
Barcelona, 140 bgs.
Palermo, 500
" 50 J. Kitchin Ld.
" 980 Bk. British N. America
Valonia
Smyrna, 470 kintals 150 bgs. Barry Brs.
" 945 G. Essayan & Co.
Farina—
Havre, 380 sks. Cunard S. S. Co
Stettin, 43 bgs.
Glucose—
New York, 550 brls. T. M. Duche & Sons
" 675
Glue—
Rotterdam, 12 cks. 120 bgs.
Boston, 4 brls Fairbank's Wd Rim Co.
Rouen, 20 cks.
Philadelphia, 10 brls. Anglo-Am Oil Co., Ld.
Rouen, 24 Co.-op. Wrale Society, Ld.
Lamp Black—
New York, 10 brls. B. R. Vickers & Sons
Manganese—
Rotterdam, 5 bgs.
Manganese Ore—
Huelva, 950 t. Darwen & Mostyn Iron Co.
Vizagapatam, 995 "
Molasses—
Boston, 1 brl. Shoe Mchnry. Co.
Ochre—
Marseilles, 21 brls.
Rouen, 11 cks.
Paint—
Philadelphia, 10 bxs Thos. Robinson & Co
Paraffin Scale—
Philadelphia, 350 brls. Thompson & Bedford
" 41
New York, 800 "
Baltimore, 300
Paraffin Wax—
Philadelphia, 75 brls.
Phosphate—
Antwerp, 400 t.
Phosphate Rock—
Port Royal, 2,600
Phosphoric Acid—
Bremen, 5 cks.
Pitch—
Marseilles, 60 brls.
Hamburg, 12 cks.
Potashes—
Montreal, 32 brls. J. Webster & Bro.
Dunkirk, 11 cks. 22 dms.
Montreal, 25
Pumice Stone—
Leghorn, 5 cs.
Messina, 30 bgs. 60 brls.
Pyrites—
Huelva, 3,053 t Matheson & Co.
Rosin—
Antwerp, 500 brls
Baltimore, 11
Brunswick, Ga., 1,990
Salt—
Skira, 15 t.
Hamburg, 200
Saltpetre—
Hamburg, 4 cks. 85 kgs.
Soap—
Marseilles, 4 cs. 26 bdls.
New York, 2 Burroughs, Wells & Co
Leghorn, 500 bxs. Weaver & Sterry
" 5
Boston, 8 W. Edwards & Son
" 15 Boots P. Drug Co.
Soapstone—
Bordeaux, 3 cs. 300 bgs. G. G. Blackwell, Sons & Co
Sodium Silicate—
Vera Cruz, 40 cks. Isaac & Samuel
Starch—
Hamburg, 240 cs.
Bremen, 40
Rotterdam, 80
Philadelphia, 200 sks.
New York, 100 bgs. T. M. Duche & Sons
" 100
Baltimore, 100 brls 820 sks. 100 bxs.
Stearine—
Marseilles, 42 bgs. Galgey & Sons
Baltimore 8 tcs.
Sulphur—
Barcelona, 1 brl.
Catania, 84 cks. 150 t. 520 bgs 10 brls.
Tallow—
Philadelphia, 115 tcs.
New York, 214 125 hds.
Boston, 20 Colby & Co.
Baltimore, 2 bxs.
Tar—
Uleaborg, 1,702 cks.
Tartar—
Bordeaux, 24 cks.
Naples, 2
Tartaric Acid—
Barcelona, qty.
Treacle—
N. Orleans, 1,800 brls.
Ultramarine—
Rotterdam, 1 ck. 5 cs.
Varnish—
New York, 12 cs. Bille Brs.
" 7 brls. W. A. Warren
Waste Salt—
Hamburg, 1,103 bgs.
White Lead—
Rotterdam, 100 cks.
Wood Pulp—
Drammen, 177 cs. L. S. Dixon
Rotterdam, 151 bls.
Sannesund, 5,203
Oporto, 410 Caima Wood Pulp Co.
Montreal, 1,005 pks. Andrews, Bell & Co.
Zinc Oxide—
Rotterdam, 25 cks.
Antwerp, 55 brls.
Zinc White—
Rotterdam, 350 cks.
Stettin, 100 Ashley & Co.
Hamburg, 40

MANCHESTER.

Week ending November 14th.

Alizarine—
Rotterdam, 181 cks. 4 cs. 2 brls.
Alumina Sulphate—
Rotterdam, 15 cks.
Aniline Colours—
Rotterdam, 56 cks. 27 cs.
Antimony—
Treport, 2 cks.
Antimony Salts—
Rotterdam, 28 cks.
Castor Oil—
Bordeaux, 411 cks. J. & P. Hutchison
Chemicals *(otherwise undescribed)*
Rotterdam 128 cks.
Chromium Acetate—
Rotterdam. 3 brls.
Coal Products *(otherwise undes.)—*
Rotterdam, 3 cks.
Colours—
Boulogne, 2 cs.
Rotterdam, 20 cks. 35 28 bxs.
Hamburg, 20 bgs.
Antwerp, 4 6
Farina—
Rotterdam, 430 bgs.
Glucose—
New York, 50 brls. T. M. Duche & Sons
" 100
Glue—
Fiume, 400 bgs.
Paris 3 cs
Rotterdam, 40
Treport 1 10 bls.
Lead Acetate—
Hamburg, 16 cks.
Limestone—
Antwerp, 2 crts. 2 cs.
Manganese Ore—
Rotterdam, 2 cks.
Hamburg. 41
Mineral White—
Fiume, 950 bgs.
Ochre—
Treport, 58 cks.
Paraffin Scale—
New York, 999 brls. Anglo-American Oil Co., Ld
Potash—
Boulogne, 49 cks.
Treport, 42 21 dms.
Rotterdam, 10
Potassium Chloride—
Hamburg, 40 cks.
Pyrites—
Huelva, 1 360 t.
Soap—
Bordeaux, 4 cs. J. & P. Hutchison
Sodium—
Rotterdam 19 cks.
Sodium Nitrate—
Rotterdam, 4 cks.
Starch—
Fiume, 100 bgs.
Rotterdam, 81 cs.
Hamburg, 150
Ghent, 16 J. T. Fletcher & Co.
" 20
Antwerp, 100
New York, 100 bgs. T. M. Duche & Sons
" 200
Stearine—
Antwerp, 1 ck.
Sulphuric Acid Anhydride—
Rotterdam, 10 cks.
Tartar—
Bordeaux, 1 ck. J. & P. Hutchison
Tartaric Acid—
Rotterdam, 20 kgs.
Tin Perchloride—
Hamburg, 10 cs.
Waste Salt—
Hamburg. 145 bgs.
Wood Pulp—
Gefle, 7,714 bls. Stott, Coker, & Co.
Hamburg, 400
Zinc Oxide—
Antwerp, 20 brls.
Rotterdam, 45
Zinc White—
Rotterdam, 5 cks.

HULL.

Week ending November 14th.

Acids—
Trieste, 3 cs. Wilson, Sons, & Co., Ld.
Bari, 56 cks. "
Albumen—
Riga, 1 pk.
Ammonia—
New York, 50 clydrs.
Barytes—
Amsterdam, 100 bgs. 58 cks. Hutchinson & Son
Antwerp, 19 Bailey & Leetham
Bremen, 42
Riga, 200 Wilson, Sons, & Co., Ld.
Rotterdam, 44 Hutchinson & Son
Castor Oil—
Leghorn, 74 pks. Wilson, Sons, & Co., Ld.
Trieste, 20 cs. "
Chemicals (*otherwise undescribed*)
Bremen, 3 cs. Veltmann & Co.
Dunkirk, 56 pks. Wilson, Sons, & Co., Ld.
Hamburg, 2 cks. Bailey & Leetham
Antwerp, 5 dms. Wilson, Sons, & Co., Ld.
Colours—
Stockholm, 10 brls. Wilson, Sons, & Co., Ld.
Antwerp, 13 cks. 15 pks. "
Bremen, 8 W. S. Merrikin
Ghent, 15
Rotterdam, 3 Wilson, Sons, & Co., Ld.
" 22 pks. W. & C. L.
57 brls. 19 bxs. Ringrose
Cream of Tartar—
Rotterdam, 2 cks. W. & C. L. Ringrose
Cryolite—
Copenhagen, 6 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 3 bxs. 13 brls. W. & C. L. Ringrose
Shumac
Trieste, 267 bgs. Wilson, Sons, & Co., Ld.
Palermo, 950 "
" 253
Farina—
Stettin, 330 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 650 bls. Hutchinson & Son
Glue—
Rotterdam, 10 bkts. W. & C. L. Ringrose
Rouen, 5 cks. 26 cs. Rawson & Robinson
Dunkirk, 69 Wilson, Sons, & Co., Ld.
Hamburg, 40 bls. Bailey & Leetham
Kaolin—
Amsterdam, 20 cks. Hutchinson & Son
Lead Acetate—
Hamburg, 34 cks. Bailey & Leetham
Nitrate—
Hamburg, 3 cks. Bailey & Leetham
Ochre—
Dunkirk, 25 cks. Wilson, Sons, & Co., Ld.
Phosphate—
Ghent, 210 t.
Pitch—
Amsterdam, 25 cks. Hutchinson & Son
Rotterdam, 132 "
Antwerp, 10 Wilson, Sons, & Co., Ld.
Potash—
Hamburg, 10 cks. Wilson, Sons, & Co., Ld.
Pumice Stone—
Messina, 163 pks. Wilson, Sons, & Co., Ld.
Saltpetre—
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
Naples, 39 cs. Wilson, Sons, & Co., Ld.
Marseilles, 33
Amsterdam, 19 W. & C. L. Ringrose
Bari, 7 Wilson, Sons, & Co., Ld.
" 35
Starch—
Rotterdam, 75 cs. Hutchinson & Son
Antwerp, 80 Bailey & Leetham
Bremen, 5,836 Veltmann & Co.
Ghent, 347 Wilson, Sons, & Co., Ld.
Stearine—
Hamburg, 30 cks. Wilson, Sons, & Co., Ld.
Amsterdam, 8 bgs. W. & C. L.
Antwerp, 113 Wilson, Sons, & Co., Ld.
Sulphur—
Catania, 573 pks. Wilson, Sons, & Co., Ld.
" 2,010 70 t.
Tallow—
New York, 125 tcs. Wilson, Sons, & Co., Ld.
Dunkirk, 2 cks. "
Antwerp, 13 pks. "
Boston, 350 tcs. 30 brls. "
Tar—
Rotterdam, 1 brl. Hutchinson & Son
Tartar—
Naples, 5 cks. Wilson, Sons, & Co., Ld.
Bordeaux, 6 Rawson & Robinson
" 1
Tartaric Acid—
Rotterdam, 1 ck. W. & C. L. Ringrose
Treacle—
New York, 450 brls. Wilson, Sons, & Co., Ld.
Boston, 224 "
Turpentine—
Bordeaux, 30 cks. Rawson & Robinson
Varnish—
New York, 40 brls. Wilson, Sons, & Co., Ld.
Waste Salt—
Hamburg, qty. Bailey & Leetham
White Lead—
Rotterdam, 59 cks. Hutchinson & Son
Amsterdam, 12 "
Antwerp, 10 Bailey & Leetham
Amsterdam, 24 W. & C. L. Ringrose
Wood Pulp—
Stockholm, 30 bls. H. Briggs, Sons, & Co.
Hamburg, 260 Wilson, Sons, & Co., Ld.
Gothenburg, 1,455 "
Christiania, 1,578 "
Zinc White—
Rotterdam, 5 cks. Hutchinson & Son

GLASGOW.

Week ending November 19th.

Acetic Acid—
Rotterdam, 8 cks. J. Rankine & Son
Albumen—
Hamburg, 5 cks.
Alumina Sulphate—
Antwerp, 50 bgs. Crawford & Co.
Aniline—
Rotterdam, 35 cks. 16 cs. J. Rankine & Son
Aniline Colours—
Amsterdam, 1 cs.
Arachide Oil—
Rotterdam, 1 ck. J. Rankine & Son
Barium Sulphate—
Antwerp, 100 bgs.
Barytes—
Rotterdam, 104 cks. 203 pks. J. Rankine & Son
Castor Oil—
Marseilles, 284 brls.
Chemicals (*otherwise undescribed*)
Hamburg, 2 cs.
Cod Oil—
St. John's, N'fld., 171 cks. B. Johnston & Co.
Colours—
Antwerp, 1 cs.
Rotterdam, 70 pks. J. Rankine & Son
Cottonseed Oil—
Baltimore, 306 brls.
Cream of Tartar—
Tarragona, 5 cks.
Barcelona, 12 brls.
Dyestuffs—
Alizarine
Rotterdam, 43 brls. 2 bxs. 143 pks. J. Rankine & Son
Argols
Bordeaux, 98 bgs.
Indigo
Amsterdam, 2 chts.
Madder
Marseilles, 20 cks.
Farina—
Delfszyhl, 1,660 bgs.
Glucose—
New York, 400 brls.
Glue—
Rotterdam, 5 bgs. J. Rankine & Son
Hamburg, 20 7 cks. 38 bls.
Infusorial Earth—
Hamburg, 151 bgs.
Lead Acetate—
Hamburg, 12 cks.
Naphthaline—
Rotterdam, 2 cks. J. Rankine & Son
Ochre—
Marseilles, 44 brls.
Pitch—
Baltimore, 1 bx.
Pyrites—
Huelva, 1,675 t. Tharsis Co.
Rosin—
Baltimore, 250 brls.
Saltpetre—
Hamburg, 3 cks.
Soap—
New York, 95 brls. 130 bxs.
Starch—
Antwerp, 80 cs.
Ghent, 12
Baltimore, 100 sks.
Stearine—
Amsterdam, 122 bgs. J. Rankine & Son
Rotterdam, 32 cks. "
Sulphur Ore—
Huelva, 1,500 t. Matheson & Co, London
Tartar—
Bordeaux, 15 cks.
Tartaric Acid—
Rotterdam, 15 cks. J. Rankine & Son
Treacle—
New York, 50 brls.
Ultramarine—
Rotterdam, 1 ck. 10 cs. J. Rankine & Son
Varnish—
Antwerp, 3 cks.
Wase Salt—
Hamburg, 142 t. 4,064 bgs.
White Lead—
Rotterdam, 10 cks. 78 pks J. Rankine & Son
Wood Pulp—
Christiania, 5,046 bls.
Zinc Oxide—
Rotterdam, 25 cks. J. Rankine & Son
Zinc White—
Rotterdam, 35 cks. J. Rankine & Son

TYNE.

Week ending November 14th.

Antimony Ore—
Antwerp, 2,043 bgs. Tyne S. S. Co.
Barytes—
Antwerp, 400 bgs. Tyne S. S. Co.
Colours—
Rotterdam, 1 bx. Tyne S. S. Co.
Antwerp, 5 brls. "
Glue—
Antwerp, 1 ck. Tyne S. S
Lamp Black—
Gothenburg, 8 cs.
Limestone—
Antwerp, 8 cs. Tyne S. S
Paint—
Rotterdam, 84 dms. Tyne S. S
Plumbago—
Hamburg, 10 cks. Tyne S. S
Soap—
Rotterdam, 10 cs. Tyne S. S
Starch—
Rotterdam, 164 cs. Tyne S. S
Ultramarine—
Hamburg, 4 cks. Tyne S. S
Wood Pulp—
Gothenburg, 8 bls.
Christiania, 165
Skien, 672

GOOLE.

Week ending November 12

Acetic Acid—
Rotterdam, 40 crbys.
Alizarine—
Rotterdam, 49 cks.
Alkali—
Calais, 27 cks.
Caoutchouc—
Boulogne, 2 cks.
Colours—
Hamburg, 25 cks. 22 cs.
Rotterdam, 2 2
Dyestuffs (*otherwise undescr*
Rotterdam, 138 cks. 40 cs.
Boulogne, 48 4
Farina—
Hamburg, 260 bgs.
Delfszyhl, 160
Glucose—
Calais, 100 bgs.
Indigo—
Rotterdam, 28 chts.
Lead Acetate—
Hamburg, 4 cks.
Logwood—
Hamburg, 1,880 pcs.
Madder—
Rotterdam, 13 cks.
Phosphate—
Ghent, 970 bgs.
Potash—
Dunkirk, 9 cks. 114 dms.
Calais, 29
Saltpetre—
Hamburg, 37 cks.
Rotterdam, 100 bgs.
Starch—
Rotterdam, 28 cs.
Waste Salt—
Hamburg, 258 cks.
Wood Pulp—
Hamburg, 232 pks.
Rotterdam, 104 bls.

GRIMSBY.

Week ending November 14th.

Albumen—
Hamburg, 3 cs.
Caoutchouc—
Rotterdam, 3 pks.
Antwerp, 2 cs.
Hamburg, 3
Chemicals (*otherwise undescribed*)
Hamburg, 2 cs. 10 pks
Rotterdam, 20
Colours—
Rotterdam, 7 pks.
Antwerp, 10 cks. 21 cs. 111
Hamburg, 25 70
Lamp Black—
Malmo, 60 cks.
Pitch—
Hamburg, 180 cks.
Soap—
Hamburg, 1 cs.
Starch—
Rotterdam, 24 cs.
Wood Pulp—
Malmo, 160 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 18th.

Acetic Acid—
Auckland, £8

Acids—
Durban, 4 t. 4 c. 5 cs. £70
Penang 12 12

Alkali—
Delagoa Bay 18 c. £22
Algoa Bay, 8 t. 6 19
Dunedin, 3 12

Alum—
Melbourne, 1 t. 1 c. £6
Salonica, 5 30

Ammonia—
Melbourne, 8 pks. £24
Brisbane, 13 t. 17 c. 220

Ammonium Carbonate—
New York, 8 t. £210
Rotterdam, 22 cks 35 kgs. 150

Ammonium Chloride—
Trebizonde, 15 c. £26
Brisbane, 11 20
Batoum, 2 t. 70
Samsoun, 10 17

Ammonium Nitrate—
Pt. Elizabeth, 1 t. 15 c. £120

Ammonium Sulphate—
Ostend, 70 t. £590
Sydney, 5 43
Ghent, 52 375
Genoa, 100 750
Antwerp, 65 520
Burgbt, 135 1,030
Demerara, 204 2 c. 1,535

Anhydrous Ammonia—
Cologne, 23 cyldrs. £140

Arsenic—
Rockhampton, 1 t. £20

Bisulphite of Lime—
Calcutta, 2 t. 19 c. £55

Boracic Acid—
Antwerp, 1 t. 12 c. £53

Borax—
Rockhampton, 2 t. 10 c. £46
Brussels, 3 12 176
B. Ayres, 2 150
Melbourne 25 kgs. 28

Calcium Chloride—
Brisbane, 11 c. £22

Carbolic Acid—
Brussels, 20 dms. £14

Carbon Bisulphide—
Sydney, 200 dms 50 crts. £135

Carbonic Acid Gas—
Bombay, 17 cs £52

Caustic Potash—
E. London, 30 dms. £42

Caustic Soda—
E. London, 2 t. 4 c. £41
Algoa Bay, 3 12 85
Natal, 3 9
Philadelphia, 16 15 170

Chemicals *(otherwise undes.)*—
Dunkirk, 30 cks. £400
Rotterdam, 2 18
Cape Town, 4 c. 34
B. Ayres, 2 t. 150
Calcutta, 2 cs. 14
Auckland, 18 kgs. 73
Wellington, 2 dms. 18
E. London, 424 pks. 137
Rio de Janeiro, 7 37
Konigsberg, 2 19 125
Natal, 37 52
Melbourne, 22 cs. 5 228

Chloroform—
Algoa Bay, 1 c. 29
Wellington, 1 17
Auckland, 2 cs. 10
Sydney, 1 28

Citric Acid—
Wellington, 4 c. £24
Algoa Bay, 11 68
Rotterdam, 3 kgs. 19
Genoa, 26 10 217
Reval, 4 cks. 125
B. Ayres, 10 63
Melbourne, 10 68
Hamburg, 23 1 208

Coal Products—
Alizarine
Reval, 10 cs. £476
Dunedin, 8 cks. 100
Alizarine Dyes
Lyttelton, qty. £165
Aniline Oil
New York, 1 dm. £40
Aniline Salts
Dunkirk, 10 cks. £100
New York, 1 8
Benzol
Amsterdam, 18 puns. £211
Rotterdam, 19 48 cks. 43 cs. 1,132
Coal Tar Dyes
Calcutta, 5 cs. £10
Creosote
St. Malo, 22,916 gallons £120
New York, 500 cks. 239
Creosote Salts
Philadelphia, 900 bgs. £250
Naphthaline
Calcutta, 20 bxs. £10
Bremen, 41 cks. 104
Pitch
Alexandria, 200 brls. £67
Dunkirk, 140 t. 220
Hochfeld, 150 302
Antwerp, 825 1,312
Boston, 500 300
Cette, 1,520 2,700
Naples, 900 1,502
New York, 450 bgs. 84
Tar
Calcutta, 20 brls. £10
Pt. Elizabeth, 200 dms. 7
Algoa Bay, 520 54
E. London, 100 12

Coal Products *(otherwise undes.)*—
Melbourne, 22 dms. £16
Boston, 5 cks 53

Copper Sulphate—
Pt. Elizabeth, 3 c. £34
Melbourne, 2 t 4 33
Sydney, 20 frkns. 18
Marseilles, 20 8 320

Cream of Tartar—
Melbourne, 3 t. £239
Rockhampton, 4 10 c. 433
Wellington, 1 4 104
Sydney, 3 15 326
Cape Town, 2 13

Disinfectants—
Melbourne, 40 pks. £97
Calcutta, 225 dms. 15
Bombay, 275 160
Penang, 200 84
Colombo, 7 cks. 19
Sydney, 30 cs. 42
Auckland, 12 15
Cape Town, 40 3 18
Hamburg, 25 125
Kingston, 1 t. 3 c. 38
Fremantle, 10 21

Guano—
Demerara, 50 t. £500

Hypophosphites—
Hamburg, 6 cs. £100

Manure—
Antwerp, 10 t. £110
E. London, 10 40
Algoa Bay, 44 13 c. 249
Malaga, 13 8 117
Cape Town, 781 13 2,945
Sydney, 83 322
Santander, 10 3 60
Colombo, 10 80
Morant Bay, 70 500
Natal, 40 145
Canaria, 38 10 239
St. Kitts, 5 37

Potassium Bicarbonate—
Maine, 1 t. 19 c. £51
Melbourne, 5 8

Potassium Bichromate—
Melbourne, 1 t. 2 c. £48
Sydney, 17 36

Potassium Chlorate—
Sydney, 1 t. £38

Potassium Cyanide—
Melbourne, 50 cs. £513
E. London, 5 14
Rio de Janeiro, 2 t. 2 c. 300

Potassium Permanganate—
Melbourne, 5 c. £17
Bombay, 4 14

Potassium Prussiate—
Montreal, 17 cks. £210
Salonica, 5 c. 14
Rotterdam, 5 t. 280

Saltpetre—
Natal, 9 c. £10
Algoa Bay, 4 5
Rockhampton, 2 t. 45
Rio de Janeiro, 2 9 55
Sydney, 2 46
Cartagena, 5 132

Sheep Dip—
Rosario, 2 t. 15 c. £100
Gallegos, 1 15 147
Natal, 100 dms. 12 cs. 41
Antwerp, 200 400
Punta Arena, 4 15 150
Algoa Bay, 20 12 1,250 dms. 953
B. Ayres, 30 296 bgs 285 cs. 1,374
Falkland Is., 30 cks. 195

Soda—
Port Said, 1 t 1 c. £5

Soda Alkali—
Rotterdam, 5 t. 2 c. £31

Soda Crystals—
Melbourne, 9 c. £10

Sodium Peroxide—
E. London, 1 cs £10

Sodium Prussiate—
New York, 17 cks. £250

Sodium Sulphate—
Ghent, 70 t. £105

Sulphur—
B. Ayres, 2 t. £20
Cartagena, 1 10 c. 20
Algoa Bay, 1 18 15

Sulphuric Acid—
E. London, 20 cs. £14
Natal, 1 t 15 c. 11
Auckland, 7 3
Cape Town 2 5 9 36

Tartaric Acid—
Cape Town, 3 c. £18
Algoa Bay, 4 28
Sydney, 2 kgs. —
10 60
Wellington. 2 11
Rockhampton, 5 51
Bombay, 12 cs. 53

Tin Crystals—
Barbadoes, 7 cs. £31

LIVERPOOL.

Week ending November 18th.

Alum—
Ibrail, 1 t. 17 c. £11
Piræus, 9 18 47
Bourgas, 5 25
Braila, 2 1 q. 10
Valparaiso, 1 10 7
M. Video, 2 2 1 10
Volo, 2 4 10
Syra, 5 8 25
Fiume 19 3 5
Lisbon, 5 4 2 24
Messina, 2 8
Smyrna, 2 5 11
Beyrout, 4 20
Alexandria, 8 4 2 41
Sydney, 1 5

Ammonium Carbonate—
Paris, 17 c. 2 q. £28
Oporto, 5 8
Lisbon, 10 14
Cadiz, 1 t. 14 3 53
Odessa, 2 10 70
Barcelona, 1 2 30
Corunna, 4 1 6

Ammonium Chloride—
Hamburg, 5 c. £9
Montreal, 9 15
Lisbon, 9 16
Trieste, 1 t. 33
Naples,, 11 11
Genoa, 1 1 22
St. John, N.B., 18 18
Stettin, 1 15 35
Ibrail, 2 9 70
Philadelphia, 18 1 2 q. 380
Smyrna, 19 34
Rio de Janeiro, 17 28
Calacolo, 3 5
Volo, 6 12
Syra, 1 33
Alexandria, 3 105

Ammonium Sulphate—
Venice, 30 t. £270
Leghorn 12 120
Tarragona, 9 12 c. 1 q. 75
Valencia, 45 11 3 365

Barium Nitrate—
San Francisco, 1 t. 5 c. 3 q. £23

Bleaching Powder—
Alexandria, 4 cks,
Baltimore, 260 50 brls.
Boston, 868
Genoa, 156
Libau, 11
Montreal. 10
Nantes, 73
Newport News, 4
New York, 188
Oporto, 20
Pasages 16
Patras, 5
Rouen, 40
San Francisco, 20
Seville, 40
Vera Cruz, 7

Boracic Acid—
Toronto, 17 c. 1 q. £28

Borax—
Portland, M., 1 t. 15 c. 2 q. £36
Toronto, 4 5 2 66
Valparaiso, 1 19 3 40
Shanghai, 1 3 3 24
Ibrail, 12 14
Montreal, 4 1 3 81
Rotterdam, 6 5 128
Hamburg, 2 6 1 49
Ferrol, 10 10
Rio de Janeiro, 17 3 17
Natal, 2 42
Copenhagen, 4 2 4
Stettin, 5 11 3 100

Calcium Chloride—
Colombo, 2 t. 7 c. £6

Carbolic Acid—
Leghorn, 10 c. £36
Milan, 1 t. 71
Genoa, 4 18 1 q. 60
Antwerp, 3 10
Rouen, 1 5 75
Delagoa Bay, 7 3 12
Hamburg, 4 15 2 286
Rotterdam, 21 16 2 761

Caustic Potash—
B. Ayres, 8 c 2 q. £5

Caustic Soda—
Bahia, 10 dms.
Baltimore, 500
Barcelona, 350 74 cks.
Bilbao, 15
Boston, 280 29 75 brls.
Braila, 69
B. Ayres, 75
Cartagena, S A., 15 25 pks.
Corral, 20
Fairwater, 120
Galatz, 45
Genoa, 364
Gothenburg, 10
Halifax, 68
Hamburg, 61
Ibrail, 39
Libau, 114
Melbourne, 6 bxs. 7
M. Video, 140
Montreal. 30
New York, 627 90 50 brls.
Oporto, 86
Palermo, 30
Paris, 68
Pernambuco, 100
Philadelphia, 150 30
Pt. Elizabeth, 35 bxs.
Port Natal, 40
Riga, 350
Rio de Janeiro, 7
San Francisco, 110
Seville, 50 125 brls.
Singapore, 10
Stettin, 164
Sydney, 10
Valencia, 110
Valparaiso, 100
Vancouver, 25

Chemicals *(otherwise undescribed)*
Boston, 9 t. 16 c. 2 q. £28
Galatz, 10 17
M. Video, 1 15
Palermo, 10 17
Ghent, 7 12
Montreal. 17 88
Philadelphia, 13 9 431

China Clay—
Barcelona, 40 cks.
Bombay, 160 100 l g.
Boston 1,343
Calcutta, 87 t 10 c.
Genoa, 15
Lisbon, 170
New York, 300 cks.
Philadelphia, 350
San Francisco, 66

Coal Products—
Alizarine
New York. 5 cks.
Aniline Oil
Barcelona, 1 dm.
Aniline Salts
Barcelona, 4 cks.
Bombay, 2
Philadelphia. 4
Anthracene
Rotterdam, 100 brls.
Pitch
Bilbao, 40 brls.
Ibrail, 20
Rouen, 4 1 ck.
Sulina, 50
Tar
Alexandria, 4 brls. 1 kg.
Melbourne, 5 crts.
Philadelphia, 100
Sierra Leone, 20
Tar Oil
Pt Elizabeth. 5 cs.
Tar Salts
Montreal, 9 cks.

Cobalt Oxide—
Gijon, 1 c. 3 q. £62
New York, 9 265

Copper Sulphate—
M. Video 6 t. 1 c. £104
Constantinople. 2 3 3 q 34
Bourgas, 2 3 3 38
Marseilles. 5 60
Calcutta, 5 73
Gothenburg 1 19 2 31
Naples, 3 14 59
Paris, 25 407
Rouen, 25 5 3 394
Sydney, 2 36

Copperas
Sydney, 4 t. 14 c. £11

Disinfectants—
Montreal, 5 c £19
Smyrna, 10 6
Bombay, 2 t. 21

Guano—
Barcelona, 10 t. £76

Iron Chromate—
Havre, 10 t. 16 c. 2 q. £160

Iron Oxide —
Rouen, 6 t. 4 c. £40

Lime—
Egwanga, 3 t. 5 c. £7
Lagos, 7 19 9

Magnesia—
Havre, 1 t. 6 c. £24
Lisbon, 1 5 7

Magnesium Carbonate
New York, 2 q £7

Magnesium Sulphate
Bombay, 50 bgs
Halifax, 23 brls.
Lisbon, 5 cks

Manure—
Las Palmas, 14 t. £81

Nuts—
Amapala, 5 brls.
Antwerp, 6 kgs.
Barranquilla, 11 cks.
Beyrout, qty.
Calcutta, 40 145
Campana. 3
Cape Town, 40 dms
Colon, 25
Drewin, 1
Egwanga 20 tins
Gibraltar, 27 cs. 5 6
Hamburg, 9
Havana, 4
Hong Kong, 6 dms.
Kingston, 1
Lagos, 1 5
Loanda, 55
Manaos, 3 4
Manzanillo, 2
M Video, 30 10 brls.
New York, 95
St. Domingo, 4
St. Nazaire, 2
San Juan, 4
Torcpilla, 40
Valparaiso, 6

Painters' Colours —
Alassa, 13 kgs.
Alexandria 30 cks. 20
Arecibo, 5 tcs.
Baltimore, 108
Beyrout, qty.
Bilbao, 28
Bremen, 200 bgs.
B. Ayres, 9 cs. 36 22 brls.
New York, 2 204
Para, 2
Pernambuco, 25
Rotterdam, 2 cs.
St John's, N'fld., 6
Sulina, 60

Paraffin Wax—
Alexandria, 5 cs.
Jaffa 20
Leghorn, 21 bgs.
Manaos, 25
Odessa, 10
Pernambuco, 7
Smyrna, 26 25
Syra, 42
Trieste, 12 15

Phosphorus—
Hiogo, 1 t. £320
Tampico, 10 c. 110
Yokohama, 17 2 q. 250
Sourabaya, 3 40

Picric Acid
New York, 2 t. £200

Potash
Konigsberg, 2 t. £79

Potassium Bicarbonate —
New York, 10 c. 3 q. £16

Potassium Bichromate —
Tampico, 2 c. 3 q. £6
New York, 4 2 8
Smyrna, 1 t. 5 55

Potassium Carbonate —
Para, 1 t. 16 c. £16

Potassium Chlorate —
Gothenburg, 10 c. £20
Libau, 5 t. 190
Konigsberg, 15 30
Oporto, 1 40
Riga, 9 19 350
Stettin, 2 15 96
Hiogo, 22 10 872
Adelaide, 10 18
Copenhagen, 4 159
New York, 19 5 712
Amsterdam, 1 40
Tampico, 1 34
Rotterdam, 8 6 321
Manaos 9 18
Pernambuco, 1 40

Potassium Prussiate
Genoa, 19 c. 3 q. £56

Potassium Stannate—
Bombay, 1 t. £43

Salt
Accra 33 t. 1 c.
Adelaide, 11
Antwerp, 107 14
Baltimore, 250
Barbadoes, 50
Benty. 100
Boston. 360
B. Ayres, 97 17
Calcutta, 2,099
Christiania, 10
Conakry, 246 7
Copenhagen, 500
Dixcove, 5
Dubreka, 235 10
Egwanga, 20
Ghent, 174
Hamburg, 1 1
Ireland, 40
Lagos, 200
Monrovia, 13 10
Montreal 345 10
N. Orleans, 155
Newport News, 200
New York, 50
Old Calabar, 280
Opobo, 20
Para, 50
Pensacola, 420
Philadelphia, 599
Rangoon, 782
Rio de Janeiro, 50 cs.
Rio Nunez 100
Rotterdam, 202
St. John's N'fld., 131
St. John, N.B., 300
San Juan, 13
Savannah, 458
Sherbro, 20
Sierra Leone, 100
Sydney, 55
Wellington, N.Z., 143
Winnebah, 10

Salt Cake—
Leghorn, 100 t £144

Saltpetre—
San Francisco, 3 t. 1 c. 3 q. £66

Sheep Dip —
M. Video, 1 t. 10 c. £60
B. Ayres, 67 12 3 q. 1,616

Soap —
Alexandria, 44 cs.
Algoa Bay, 15
Amsterdam, 155 bxs.
Arica, 50
Axim. 120
Bakana, 200
Barbadoes, 200
Belize, 250
Bombay, 56 21
Calcutta, 250 bdls. 64
C. C. Castle, 274 2
Cape Town, 900
Cartagena, S.A., 3
Corinth, 8
Curacao, 387
Delagoa Bay, 425 10 25
E. London, 150
Genoa. 44 kgs.
Gd. Bassam, 120
Havre, 232
Kingston, 2,252
Karachi, 10
Lagos, 224
Lome, 50
Malta, 65
Naples, 1
New York, 30
Old Calabar, 200
Opobo, 1,500
Panama. 1
Para, 200 1
Patras, 12
Philadelphia, 50 brls.
Piræus, 6
Pt. Natal, 60 31
Pram Pram, 20
Rangoon 3
Rio Nunez, 6
Rotterdam, 91 410
St. Croix, 1
St. Lucia, 26
St. Nazaire, 875
San Fernando, 450
St. Thomas, 1,039
San Juan Del Sur, 80
Shanghai, 3,020
Singapore, 410 25
Taltal, 24
Teneriffe, 112
Trinidad, 580 2
Warri, 500

Soda Alkali —
Galatz, 40 brls.
Genoa, 70
Leghorn, 29
New York, 35
Portland, Me. 40
Smyrna, 45

Soda Ash—
Ancona, 8 cks.
Antwerp, 350 bgs.
Baltimore, 16 33 tcs. 2 440
Barcelona, 20
Bombay, 35
Boston, 100 59 525
Brisbane, 271
B. Ayres, 300 brls.
Calcutta, 131 10
Ceara, 133
Christiania, 121
Copenhagen, 15
Constantinople, 40
Corfu, 400
Genoa, 80
Halifax, 200 kgs
Leghorn 5
Libau, 400
Montreal, 89 84 t. 5 4 47
Naples, 13
New York, 10 1,429 6,400
Para, 108 75 brls.
Philadelphia, 200
Piræus. 1,169
Seville 3
Smyrna. 419
Sydney, 50
Tampico, 150
Tripoli, 300
Venice,
Yokohama, 348

Soda Crystals—
Adelaide, 34 brls.
Boston, 184 kgs. 100 bgs.
196
Calcutta, 33 30
Halifax, 50 10
Kingston, 10
Malta, 50 cks.
N. Orleans, 280
Philadelphia, 140
Valparaiso, 100

Sodium Bicarbonate—
Aalborg, 4 cks
Adelaide, 128 kgs. 30 bg
20 brls.
Algoa Bay, 20
Antwerp, 200 10
Bombay, 530
Brisbane, 460
B. Ayres, 50
Cape Town, 20 9 cks.
Christiania 55
Copenhagen, 4 cks.
Genoa, 35 4
Havana, 20
Melbourne, 115 8 brls.
M. Video, 79
N. Orleans, 150
Newport News, 125 cks.
Odessa, 350
Paris 160
Pt. Natal, 40
Rangoon, 20
Riga, 515
Salonica, 40
Smyrna 80
Stettin. 30
Sydney, 330 10
Tampico, 20
Veile, 20
Venice, 100
Vera Cruz, 15

Sodium Carbonate—
New York, 84 brls.

Sodium Chlorate—
Hamburg, 50 kgs. 4 brls.
Vera Cruz, 8

Sodium Hyposulphite—
San Francisco,

Sodium Silicate —
Corunna, 3 brls.
Lisbon, 16 cks
Piræus, 5 cs.
Rotterdam, 80
Salonica, 10
Sydney, 18
Zante. 17
Barcelona. 30 100

Sodium Sulphate—
Lisbon, 30 kgs.

Starch —
Copenhagen, 2 cks.
St. Nazaire, 1 cs.

Strontia—
Hamburg, 102 t. 2 c.

Strontium Nitrate—
San Francisco, 2 t. 10 c.

Sulphur—
Boston, 200 t. 9 c.
Antwerp, 10 1
Montreal, 9 3 1 q

Superphosphates—
Bordeaux, 50 t. 12 c. 2 q.
Malaga, 22
Barcelona. 27 19

Varnish —
Campana, 41 cs.
Corfu, 2
M. Video, 2
Piræus, 1
St Domingo, 1
Yokohama, 5
Monrovia, 1

White Lead—
Vera Cruz, 1 ck.

Whiting—
St. John's, N'fld., 25 brls.
Shanghai, 10 cks.

Zinc Chloride—
Bombay, 2 t. 16 c. 3 q
Oporto, 6
Vera Cruz, 12

Zinc Oxide—
San Francisco, 1 c.

MANCHESTER

Week ending November 17th.

Albumen—
Barcelona, 1 cks.

Alum —
Beyrout, 15 cks 20 brls.
Tripoli, 13
Larnaca, 6

Ammonium Sulphate —
Valencia, 976 bgs.

Aniline Colours—
Barcelona, 1 ck.
Hamburg, 1 cs.

ne Oil—
elona, 12 cks.
ne Salts—
elona, 10 cks.
ic Soda—
s, 25 dms.
out, 25
icals *(otherwise undes.)*—
andria, 8 cks.
ras—
out, 10 brls.
nseed Oil—
s, 40 brls.
ote Oil—
andria, 170 brls.
—
erp, 171 t. 15 c.
—
ah, 25 bxs.
Crystals—
andria, 200 cks.
s, 10
kia, 20
m Arseniate—
ey, 32 kgs.
m Bicarbonate—
andretta, 13 kgs.
alts—
burg, 91 cks.
l—
erdam, 41 cks. 21 dms.

HULL.

ek ending November 14th.

i—
tantinople, 200 cks.
'acene—
erdam, 137 cks.
hing Powder—
n, 22 cks.
ic Soda—
2 cks.
ig, 50 dms.
York, 400
, 43
icals *(otherwise undescribed)*
erp, 2 cks. 2 cs.
4
en, 2 pks.
nhagen, 7 50
tiania, 1 710 slbs.
theim, 346 20
irk, 1 cs
ig, 1 2
enburg, 2 24
burg, 12 58
sberg, 10
, 5
York, 73 565
a, 1 t. 1
erdam, 20 58
holm, 2 3
etersburg, 26
, 37 5 kgs.
nseed Oil—
erdam, 138 c.
nhagen. 340
antinople, 173
tiania, 17
irk, 112
enburg, 152
burg, 1,164
erdam, 351
holm, 151
uffs *(otherwise undes.)*—
erp, 1 ck.
n, 17
York, 10 dms.
erdam, 5 1 cs.
holm, 1
etersburg, 15
in, 1
—
en, 4 cs.
York, 56 cks.
o—
irk, 250 sks.
ed Oil—
erp, 202 c.
erdam, 400
en, 7
nhagen, 17
tantinople, 18
tiania, 478
theim, 129
burg, 827
nger, 140
esia—
etersburg, 3 cks. 4 cs.

Mineral White—
Rotterdam, 10 cks.
Painters' Colours—
Antwerp, 28 cks 1 pk.
Amsterdam, 141 1 cs.
Copenhagen, 2 2 1
6 dms.
Christiania, 2 23
Dunkirk, 1
Danzig, 26
Ghent, 1
Gothenburg. 1 10
Hamburg, 12
Konigsberg 20
Odessa, 50
Rotterdam, 14
Stockholm, 15 4
Stettin, 28
Paraffin Wax—
Odessa, 80 bgs.
Pitch—
Dunkirk. 120 t.
Salt—
Wasa, 2 dms.
Soap—
Antwerp. 1 ck.
Christiania, 2 cs.
Dronitheim, 1
Hamburg, 3
Tallow—
Gothenburg, 20 cks.
Rotterdam, 39
Wasa, 111
Tar—
Antwerp, 6 cks.
Dunki k, 73
Treacle—
Abo, 10 cks.
Wasa, 15
Varnish—
Antwerp, 1 cs
Danzig, 1 ck.
Gothenburg, 1
Rotterdam, 1

GLASGOW.

Week ending November 19th.

Ammonium Sulphate—
Baltimore, 504 t. 14¾ c.
Italy, 115
Philadelphia, 24 1 ¾
Spain, 332 5
Valencia, 45 13
La Rochelle, 152
Calcutta, 4 10
Hamburg, 50 11
Bichrome—
Sydney, £21
Bleaching Powder—
Calcutta, 35 t. 2 c.
Borax—
Rotterdam, £10
Caustic Soda—
Calcutta, 18 t. 14 c.
Chemicals *(otherwise undes.)*—
Lisbon, £177
Melbourne, 1 t. 2½ c.
Rangoon, £121. 18s.
Coal Products—
Benzol
Hamburg. 3 t. 16 c.
Creosote
France, £150
Pitch
Ancona, 967 t. 17 c.
Canada, 1,136 7
Havre, £807
Mauritius, 4 10
La Rochelle, 550
Oporto, 26 1
Caen, 450
Tar
Boston, £55
Canada, 23 t. 18 c.
Kurrachee, 72
U.S.A.. 1 2¼
Tar Acids
U.S.A., 12 ts.
Tar Oil
Hamburg, 33 t. 15 c.
Coal Products *otherwise undes.*)—
Rotterdam, £501
Dyestuffs *(otherwise undescribed)*
Ipswich, £46
Lisbon, 67
Extracts—
Barcelona, 5 t. 5¼ c.
Boston, 5 15
Canada, £76

Farina—
Oporto, 5 t.
Gelatine—
U.S.A., 1,350 lbs.
Glue—
E. London, 1 t.
Linseed Oil—
Malta, 2 t. 12¼ c.
Logwood—
Oporto, 8 t. 5 c
Lisbon, 10 5½
Magnesium Sulphate—
Mauritius, 2 t. 4½ c.
Manganese—
Antwerp, £50
Paint—
Gibraltar, £30
Painters' Colours—
Bombay, £60
Cape Town, 62
Brisbane, 20
Melbourne. 24
Rangoon, 75
Sydney, £454. 19s.
Paraffin Wax—
Bari, 1 t. 10 c.
Fiume, 64 9¾
Italy, 25 19
Leghorn, qty.
Marseilles. £65
Christiania, 19
Bilbao, 10 3½
Bordeaux, 73
Lisbon, 30
Potassium Bichromate—
Antwerp £56
Barcelona, 493
Italy, 1,405
Kurrachee, 85
Marseilles. 220
Philadelphia, 403
U.S.A. 276
Potassium Chlorate—
Sydney, 3 t.
Soap—
Mauritius, £77. 13s.
Natal, 10 c.
Sodium Bichromate—
Barcelona, 19 t. 11¼ c.
Italy. 39 9¾
Starch—
Antwerp. £60
Sulphuric Acid—
Rangoon, £294
Tallow—
Rotterdam, 8 t. 17 c.
Treacle—
Algoa Bay, 2 t. 10 c.
Bergen, 6 6
Christiania. 31 17
Gothenburg, 56 15¾
Norrkoping, 29 ½
White Lead—
Mauritius, 2 t. 10 c.
Algoa Bay, £46
Zinc Ashes—
Rotterdam, 10 t. 4 c.

TYNE.

Week ending November 14th.

Alkali—
Amsterdam, 35 t. 5 c.
Rotterdam, 5
Reval, 17 5
Christiania, 7 1
Antimony—
Hamburg, 10 t.
Rotterdam, 3
Barium—
Hamburg, 6 t. 11 c.
Genoa, 25 5
Barium Carbonate—
Rotterdam. 100 t.
Bleaching Powder—
Antwerp 35 t. 5 c.
Bergen, 10 19
Hamburg, 62 3
Konigsberg. 11 8
Leghorn, 6 7
Amsterdam, 14 12
Rotterdam, 26 14
Odense, 9 15
Copenhagen, 20 4
Drontheim, 2 1
Arendal, 30 4
Borax—
Aarhuus, 1 t.

Caustic Soda—
Antwerp, 14 t. 18 c.
Hamburg, 9 11
Konigsberg, 25 17
Venice, 30
Genoa, 42 8
Rotterdam, 10 16
Aarhuus, 1 3
Reval, 10 10
Harlingen, 4 18
Copenhagen, 9 11
Bergen, 2 19
Iron Sulphate—
Christiania, 6 t. 4 c.
Magnesia—
Hamburg, 3 t.
Genoa, 2 2 c.
Manure—
Genoa, 127 t. 5 c.
Ochre—
Christiania, 3 t. 4 c.
Paint—
Hamburg, 2 t.
Genoa. 1 c.
Copenhagen, 3
Arendal, 5
Soda—
Antwerp, 5 t.
Svendborg, 50 8 c.
Leghorn, 10
Amsterdam, 10 4
Genoa, 5 13
Rotterdam, 2 13
Arendal, 5 3
Christiania, 25 9
Soda Ash—
Hamburg, 10 t. 5 c.
Konigsberg, 45 5
Genoa. 13
Christiania, 5 7
Sulphur—
Rotterdam, 2 t. 10 c.
Tallow—
Genoa, 16 t. 7 c.
White Lead—
Arendal. 1 t. 1 c.

GOOLE.

Week ending November 11th.

Alkali—
Antwerp, 2 dms.
Benzol—
Rotterdam 73 cks.
Chemicals *(otherwise undescribed)*
Amsterdam, 200 bgs.
Ghent, 1 cs.
Hamburg, 5 cks.
Coal Products *(otherwise unaes.)*—
Antwerp, 2 cks. 2 cs.
Amsterdam, 20 pks.
Boulogne, 25
Hamburg, 6
Rotterdam, 8 3
Colours—
Amsterdam. 30 cks
Boulogne, 1 cs.
Harlingen, 12 1
Rotterdam, 1
Dyestuffs *(otherwise undescribed)*
Ghent, 4 cks.
Rotterdam, 45
Manure—
Ghent, 500 bgs.
Pitch—
Rouen, 130 t.
Antwerp, 803

GRIMSBY.

Week ending November 14th.

Alkali—
Rotterdam, 10 cs.
Chemicals *(otherwise undescribed)*
Hamburg, 24 dms.
Coal Products *(otherwise undes.)*—
Dieppe, 125 cks. 3 cs.
Hamburg, 1 7 pks.
10 btls. 1 dm.
Manure—
Antwerp, 500 bgs.
Soap—
Dieppe, 12 cs 9 pks.

PRICES CURRENT. WEDNESDAY, NOVEMBER 25TH,

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5/10½	& 8	9
,, Glacial .. .. ,,		0	-
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¼
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	1½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	23	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B. .. .. per lb.	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	20	10	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &	35/-	
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4½
,, Sulphate (grey) London .. .. .. per ton	7	17	6
,, ,, (grey) Hull .. .. ,,	7	13	9
Aniline Oil (pure) .. .. per lb.	0	0	11
Aniline Salt ,, ... ,,	0	0	10½
Antimony .. .. per ton	29	15	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	1	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	4	0
,, 50/90 ,, ... ,,	0	3	0
Carbolic Acid (crystallised 40°) .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	2	1
Creosote (ordinary) .. .. ,,	0	0	1½
,, (filtered for Lucigen light) .. .. ,,	0	0	2
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	7
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	49	2	6
,, Sulphate .. .. ,,	17	0	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	42	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	13	0	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	0	0
,, ,, brown ,,) .. .. ,,	14	15	0
,, Carbonate (white lead) pure .. .. .. ,,	16	0	0
,, Nitrate .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	10	
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1	17	
,, Calcined Magne .. .. per ton.	8	15	
,, Sulphate (Epsom Salts) .. .. per ton	2	15	
Manganese, Sulphate .. .. ,,	16	10	
,, Borate .. .. per cwt.	2	10	
,, Ore, 70 % .. .. per ton	3	12	
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils:—			
Cotton-seed .. .. per ton	17		
Linseed .. .. ,,	18		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	20	10	
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. .. nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	
,, ,, (Caustic Potash) 75/80 % .. ,,	21	0	
,, ,, (Caustic Potash) 70/75 % .. ,,	20	0	
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3	17	
,, Prussiate Yellow .. .. per lb.	0	0	
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	
,, ,, (Caustic Soda-ash) 48 % .. .. ,,	4	5	
,, ,, (Carb. Soda-ash) 48% .. .. ,,	4	0	
,, ,, (Alkali) 58 % .. .. .. ,,	3	10	
,, ,, (Soda Crystals) .. .. .. ,,	2	0	
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14	10	
,, Chlorate .. .. per lb.	0	0	
,, Borate (Borax) .. .. net, per ton.	20	0	
,, Bichromate .. .. per lb.	0	0	
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	
,, ,, (60 % Caustic Soda) .. ,, ,,	6	2	
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	17	
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	
,, Bicarbonate .. .. ,,	6	10	
,, Hyposulphite .. .. ,,	5	5	
,, Manganate, 25% .. .. ,,	15	0	
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	
,, Nitrite, 98 % .. .. per ton	30	0	
,, Phosphate .. .. ,,	12	10	
,, Silicate (glass) .. .. per ton	4	10	
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	
,, Stannate, 40 % .. .. per cwt.	3	2	
,, Sulphate (Salt-cake) .. .. per ton.	1	0	
,, ,, (Glauber's Salts) .. .. ,,	1	10	
,, Sulphide .. .. ,,	6	15	
,, Sulphite .. .. ,,	5	0	
Strontium Hydrate, 100% .. .. ,,	3	0	
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	
,, Barium, 95 % .. .. ,,	0	0	
,, Potassium .. .. ,,	0	0	
Sulphur (Flowers) .. .. per ton.	7	10	
(Roll Brimstone) .. .. ,,	6	10	
,, Brimstone: Best Quality .. .. .. ,,	4	12	
Superphosphate of Lime (26% .. .. ,,	2	15	
Tallow .. .. ,,	18	10	
Tin Crystals .. .. per lb.	0	0	
,, English Ingots .. .. per ton	63	0	
Zinc (Spelter) .. .. ,,	17	15	
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	

THE

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AND

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Advertisements intended for insertion in the current week's issue should reach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

BACTERIOLOGY AND PAPER MAKING.

WE are living just now in an age of bacteriological scares and crazes, and if all that is told us in certain public prints is true, it is something more than "passing strange" that any of us are here at all to learn how great are the dangers we have daily escaped for the last half century.

There seems to be no respite from these ills that come like flies in the summer. Meat, bread, water, and there is no knowing what besides, teem with invisible dangers, to which the unenlightened expose themselves hourly, and now yet another source of danger has been added—the wrapping paper used by grocers, butchers, and others.

Though the argument of survival *quand même* applies with equal force in this case as in the majority of others, the suggestion has certain claims to consideration, since to reflect on the previous history of the paper itself, and also the printing ink with which it is frequently adorned, means that you will have to contemplate a prospect which, to say the least, is not appetising.

And yet again, there are few who would care to dwell at meal times upon the personal charms and surroundings of those humble, but occasionally noisome dealers who, by custom, are nominally associated with things maritime, but who are nevertheless the principal agents for the collection and supply of such wrappings.

However, without committing ourselves to any conclusive expression of opinion, we are all the same not going to fall foul of this latest suggestion. The reason is simply that apart from any hygienic merits the idea is worthy of place on account of the stimulus it gives to inventive minds—a stimulus which in this particular instance promises to benefit the chemical and paper trades.

There are few people who are not familiar by this time with the parchmentised or waterproof wrappings generally used for butter and similar articles. The obvious conveniences of this paper have caused it to be very popular with all provision dealers, and to be largely used by the better class of grocers, and many other tradespeople.

Now that this vegetable parchment can be recommended on hygienic grounds, its use is likely to increase still more, while any improvement in its manufacture that would tend to cheapen it, would be the means of opening the way to an almost limitless consumption.

Sad to relate, this class of paper has up to now been almost wholly made in Germany, since sulphuric acid is extensively used in its production, which means the discharge of acid effluents, and considerable river pollution in consequence. This is one reason why the efforts which have been made to establish the manufacture of this special kind of paper in this country have proved unsuccessful.

The difficulties have not long proved insurmountable, however, for only a few months ago a patent was granted for dealing profitably with this waste acid and acid waste waters. This patent was abstracted in the *Journal*, No. 484 p. 129, from which it may be seen that the waste acid is used for the production of Epsom salts, and also an excellent paper-filling material. The immediate outcome is, we understand, that a works is soon to be erected for manufacturing this paper and the corresponding bye-products. The undertaking has an encouraging outlook, to say the least, and affords an example of how close is the relationship between industries and scientific research—even in the shape of bacteriological surmisings and speculations.

IS BORACIC ACID INJURIOUS OR NOT?

This somewhat vexed question is once more to the fore, and from one point of view does not seem to have progressed much further towards solution since our last reference to it at the beginning of the year.

The case in favour of allowing a small percentage of preservative being added to foods such as butter, say half a pound of boracic acid to every fifty-six pounds of butter, was at that time made out on reasonable lines.

At the same time we are not aware if any patient creature has, in the meanwhile, been executing a series of experiments, to ascertain whether or no the regular consumption of minute quantities of this preservative has any appreciable effect on the human system.

If any such one has been so occupied we await his conclusions with much interest.

In the light of the recent decision of the Health Committee of the Birmingham Corporation it is to be presumed that *data* bearing on this point are not forthcoming. Yet a few prosecutions have been made under the Food and Drugs Act on the score of boracic acid being found in butter sold in Birmingham, though it is a matter of general knowledge that the trustees of the Cork Butter Market countenance its introduction.

As the result a trade deputation has waited upon the Health Committee, who, after due deliberation, have consented to suspend further proceedings pending the production of more direct testimony as to the merits or demerits of the practice of using this acid as a food preservative. It is a more than usually unreserved concession from the administrators of the Act, and should lead to some authoritative declaration on the point in the near future.

SOCIETY OF CHEMICAL INDUSTRY.—*London Section.*—The next meeting of the society will be held at the Chemical Society's Rooms, Burlington House, on Monday, December 7th, 1896, at 8 p m, when the following papers will be read:—(1) "The Alkali Manufacture: An Historical Sketch," by Alfred E. Fletcher, F.I.C., F.C.S. (late H M. Chief Inspector under the Alkali, etc., Works Regulation Act). (2) "Notes on the Spontaneous oxidation of Aluminium in contact with Mercury," by H. F. Hunt and L. J. Steele, A I E.E.

AN "EXPLANATORY" DICTIONARY.—Such is the title of a small English-French, French-English dictionary that has recently been published, and which aims chiefly at explaining the terms and phrases relating to finance, stock exchange transactions, joint-stock companies, and, especially, gold mines. Unfortunately this explanatory compilation needs a great amount of preliminary explanation before its beauties can be appreciated. Thus in the French-English section the term "chloride" appears with the English equivalent given as "chlorue;" and in the English-French section neither word is to be found. Then under "chloruration," strange to say, "cyanide" is given as the equivalent, and here again neither word appears in the English-French section, where it is necessary to turn to "chlorination" in order to find the English version of the explanation under "chloruration;" all of which is rather confusing. But it will take a lot of explaining to account for the conjoint classification of chloruration and cyaniding.

Our Book Shelf.

DICTIONARY OF THE COAL TAR COLOURS. By G. H. Hu
Second Edition. 212 pp. London: Heywood and Co., Ltd. 18

A glance at this useful compilation will reveal that it is not mer a second edition, but, to a large extent, a new work, since the origi has been so thoroughly revised and considerably enlarged. This itself says much when it is remembered that we classed the first edit as a work of undoubted utility and merit. In its present form the b is not a mere dictionary of coal tar colours, because short but exp articles on the principal families and fundamental bases have b introduced. Thus, the amines and azo groups are described as fami as well as individually, aniline, anthracene, benzol, naphthol, a many other products being similarly treated. There is also an inter ing enlargement of the article on the dyeing of cotton with azo colo and their direct production on the fibre. Lastly, the introduction been supplemented with an excellent article on the Methods of Dy and Printing with the Coal Tar Colour on cotton, silk, wool, and cal with examples.

Apart from these and a few other additions of a similar nature, classification and treatment of the respective colours are the same a the first edition. It would not be very difficult to point out one or slight discrepancies, but it is hardly fair to be too critical with a w which is primarily intended for a dictionary. One or two of the la colours are not included, but, as compared with many other wo which profess to be brought right up-to-date, there are surprisingly of the new colours omitted. It is neatly got up, handy, and to colour chemist indispensable.

PHOTOGRAMS OF 1896. 112 pp. London: Dawbarn and Wa
Limited. 1896. 1s., cloth boards, 2s.

This annual collection of selected specimens of English, Americ and Continental photographic art is both interesting and helpful. I worthy of more than the cursory glance of passing interest, which t get-up and choice of subjects is bound to command. The descript text is brief but sufficient for the purpose, stating all that is necessary emphasise the points of the subjects. Most of these are instructive what to follow, though there are also lessons of warning to be learn the conscientious student of photographic art. The ninety-two ha tone reproductions, and 16 line sketches which are provided for t nominal charge of 1s. should be obtained and studied by all phot graphers. We hope the success which this year's production deserv may ensure our having to judge of and enjoy similar appetising colle tions for years to come.

EVERYBODY'S MEDICAL GUIDE. By M D. 122 pp. Londo
Saxon and Co. 1896. 6d.

This series of publications is well known, and as far as they go a useful. The preface explains the exact aim and scope of this particul issue, and it certainly is a handy, and, generally speaking, trustworth guide for that class known as the public. As regards its suitability f travellers we are inclined to think that while its price justifies its bei included as one of the appertenances of the medicine chest, it woul be scarcely wise to depend entirely on the store of information th book contains. As compared with its scope it is certainly well up t the times, and very free from anything suggestive of "quackery."

NOTES ON QUALITATIVE ANALYSIS. By W. P. Mason. Third editio
56 pp. Easton (U.S.A.): The Chemical Publishing Co. 1896.

It is very difficult to do fairly by this class of publication. They f a want, but that want is so circumscribed that it is hard to say how f its satisfaction can justifiably be published. The author candi admits that the market is already overstocked, and states as his ad excuse for making this addition that it meets the requirements of h own classes. It has novel and commendable features, while, on th other hand, the treatment of some points is open to much criticism Perhaps, as a whole, the helpful points outnumber the defects. Th book is specially suited for the American method of teaching, and therefore, naturally works in well with the "quiz class" system. It is not a complete guide to even elementary analysis, as the scheme f analysing phosphatic mixtures is intentionally omitted. Such a boo like a key, only fits one lock, and its general utility and applic bility is about as great.

THE ELEMENTS OF ELECTRO-CHEMISTRY. By Max Le Blan
Translated by W. R. Whitney. 277 pp., with illustrations an indexes of subjects and authors' names. London: Macmillan an Co., Limited. 1896. 6s.

Up to the present time the average English chemist, acquainted on with his mother tongue, has experienced great difficulty in obtainin

any really solid and systematic information on the subject of Electro-Chemistry. Patents have been taken out by the score, and not a few articles and papers have been written and published in this connection, but generally speaking, what literature is available deals almost entirely with the application of the science to some particular practical object, and little attempt has hitherto been made to put before the English student a comprehensive introduction to, and explanation of, the fundamental laws of Electro-Chemistry. This want is exactly met by the volume before us, and we shall be greatly surprised if it is not soon to be found on the bookshelf of almost every chemist throughout the country. The work consists of eight chapters devoted to - I. The Fundamental Principles of Electricity. II. Development of Electro-Chemistry up to the Present Date. III. The Arrhenius Theory of Dissociation. IV. The Migration of the Ions. V. The Conductivity of Electrolytes. VI. Electromotive Force. VII. Polarisation. VIII. The Ordinary Galvanic Elements and Accumulators.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Producing Caustic Alkalies and Alkaline Carbonates. T. Twynam. 25,740. November 16.

Gas Absorbing Apparatus for Estimating the Quantity of a Particular Gas Present. M. Arndt. 25,762. November 16.

Manufacture of Artificial Silk. A. V. Newton. 25,789. November 16.

Compressing Air and other Gases. J. S. Haworth. 25,794. November 16.

Producing Chlorates and Hypochlorites of Potassium and Sodium by Electrolysis and Apparatus therefor. J. Greenwood. 25,798. Nov. 16.

Electrolytic Production of Alkalies and Zinc. Dieffenbach. 25,804. November 16.

Filter Presses. W. Warner. 25,850. November 17.

Artificial Rubber. R. Bell. 25,863. November 17.

Crushing Mills. W. H. Coward. 25,935. November 17.

Manufacture of Phosphorus Compounds. P. G. W. Typke. 25,938. November 17.

Filters. J. T. Horner. 25,940. November 17.

Treating Acid Waters or Effluents. J. T. Norman. November 17.

Combination of Electrolysis and Röntgen Rays. D. Greville. 26,000. November 18.

Method and Apparatus for Clarifying Crude Oils. W. R. Harrison and E. Stevenson. 26,007. November 18.

Obtaining Turpentine from Wood and Wood Waste. A. Schmidt. 26,015. November 18.

Filter Presses. J. Critchlow and T. Shore. 26,112. November 19.

Apparatus and Process for Manufacture of Gelatine and Glue. J. Hargreaves. 26,170. November 19.

Improvements in and Apparatus for the Preparation of Peat Charcoal. E. T. Zohrab. 26,191. November 19.

Manufacture of Hydrogen Gas and Apparatus therefor. F. O'Connor Prince 26,284. November 20.

Manufacture of Soap. E. G. Scott. 26,285. November 20.

Manufacture of Red Lead. J. Fairlie. 26,322. November 21.

Process for Making Soap R Gesell. 26,396. November 21.

Manufacture of Artificial Camphor. H. E. Aspinall. 26,397. November 21.

Treating Refractory Lead Ores. F. Ellershausen. 26,412. November 21.

Method and Apparatus for Producing Calcium Carbide, and also Applicable to the Reduction of Metals from their Oxides, etc. H. Maxim. 26,425. November 21.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

Improvements in the Method of, and Apparatus for Concentrating and Evaporating Liquids, Applicable also for Obtaining Solutions of Salts and the like. A. Kumpfmiller, Höcklingsen, near Hemer, Westphalia, and E. Schultgen, Iserlohn Hagenerstrasse 63, Westphalia. Eng. Pat. 17,488. October 7, 1896.

The heater and the evaporator are two separate vessels at different levels. The former is at the lower level, and consists of a coil of pipe in a steam jacket. The evaporator is partially exhausted, and at such a height that the pressure of the column of liquid prevents the evolution of any steam in the heater. The formation of steam only commences when the heated liquid rises sufficiently to be under reduced pressure. There is, therefore, a constant transmission of heat from the heater to the evaporator, and a constant transformation of water into steam. There is a suitable device for the interception of any crystals that may separate. The same arrangement is also suitable for lixiviation purposes. There are three figures.

Improved Process and Apparatus for Purifying Water. H. L. Doulton and R. Meldrum, both of Lambeth Pottery, London. Eng. Pat. 22,132. November 20, 1895.

The water is purified by the addition of certain chemical salts, and filtration through a specially constructed filter of the two-decker Doulton type. A minute quantity of potassium or sodium permanganate is suggested as efficacious, but the following are also named as suitable for use in conjunction with the permanganates:—Magnesium sulphate, chloride, or acetate, calcium chloride, aluminium sulphate, ferric sulphate, or chloride, etc. For the alkaline permanganates the corresponding salts of calcium, magnesium, or zinc may be used. The water so treated is passed through filtering materials like powdered charcoal, coke, or porous silica. Two forms of suitable filters are illustrated.

Improvements in the Method of, and Apparatus for, Separating Insoluble Substances from Liquids. W. E. Heys, 70, Market-street, Manchester. (Communicated by J. Hundhausen, Hamm, Westphalia.) Eng. Pat. 22,920. November 30, 1895.

A rectangular trough, with sloping sides, is fitted with a perforated bottom, the intervening space forming a vacuum chamber, and is connected with an exhauster. Over the perforated bottom a filtering cloth or felt travels, and is caused to pass over a drum above the level of the liquid in the trough. As it descends on the further side of the drum it engages with the edge of a smaller trough, which acts as a scraper, removing the sediment which falls off into the trough, and is delivered at the end by means of an endless worm conveyor. A special feature is the ease with which the filtering cloth sits to the sloping sides of the sedimentation trough, ensuring the maintenance of the vacuum under the false bottom. There are four drawings.

Improvements in the Method and Apparatus for Drying Sensitive Substances. W. E. Heys, 70, Market-street, Manchester. (Communicated by J. Hundhausen, Hamm, Westphalia.) Eng. Pat. 22,924. November 30, 1895.

A number of six-sided revolving cylinders are used, heated both centrally and externally. The chief novelty of the apparatus is the construction of the cylinders. To a hollow centre tube six brackets are fastened. By suitable fittings two cloths are stretched over these brackets, parallel to each other, the one at the extremity of the brackets and the other near the central tube. In this way the drying chamber is formed. The whole rotates in a heated chamber, while the central flue is also heated. By means of cloth strips attached to the brackets the cylinder can be divided up into six separate chambers. Where the cloths need to be changed for drying different substances the construction is modified to facilitate the changing. There are four figures, showing the apparatus complete and details of the drying cylinders.

A Protector for the Eyes, to Enable Firemen and Others to See in the Densest Smoke and Fumes from Sulphur and Noxious Gases of any kind without Injury to the Eyes. J. Morris, jun., fire engineer, Salford, and T. Wilson, fireman, 38, Camp-street, Ashton-under-Lyne. Eng. Pat. 23,095. December 3, 1895.

This is a simple modification of the familiar goggles, in which glass is replaced with wire gauze. Fine gauze eye-pieces are fitted with vulcanite rims, which in turn fit into a rubber band, and are held thereby in position on the head. Sectional and other diagrams are given, which at once explain the construction and method of application.

Improvements in or Connected with Apparatus for the Electrolytic Decomposition of Liquids. G. and G. W. Bell, 97, Newsham-drive, Newsham Park, Liverpool. Eng. Pat. 20,542. October 31, 1895.

The apparatus is primarily intended for the decomposition of brine, but is also applicable to the decomposition of other solutions. The apparatus is built up in three-chambered tiers. The first and lowest is the anode chamber, in which the brine is decomposed; the second is the cathode chamber (mercury being used as the cathode), wherein the caustic alkali is formed; the third and topmost chamber is connected by passages with the anode chambers, both below and the next above, and in it the chlorine collects and passes into the exit pipe. The chambers are separated by diaphragms, dividing the anode chamber from the top of the cell below, being of insulated metal, while the anode and cathode chambers have porous diaphragms on which the mercury is held by a suitable medium. The chambers in general are made of cast-iron, the exposed parts being protected where desirable. There are two figures, showing elevation and plan views, partly in section.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE opening meeting of this present session of the local section was held on Wednesday, the 25th November, at University College, Nottingham, when a fair number of members assembled, including Mr. Carulla (the chairman) and Mr. L. Archbutt (from Derby). The discussion on Mr. Paton's paper on "The Amount of Air Contained in Water," left over from last session, first occupied the attention of the meeting. Mr. G. J. Ward replied at some length to a number of questions with which the paper ended, and Dr. Clowes mentioned in the course of his remarks, that he had found the dissolved oxygen in water to be an absolute test of its purity in regard to the absence of sewage matter. Water from ordinary sources wholly free from dissolved oxygen would certainly be contaminated with sewage. Mr. Archbutt joined in the discussion, and Mr. Paton replied, instancing a remarkable condition in air pump practice when air inlet valves have to be provided to prevent what is known as the "water hammer" action. But for the air admitted into the air pump cylinder by such valves to act as a cushion there would be danger of a breakdown in the machinery. The Chairman then said that having cleared the arrears of last session they would now begin the new one He was sorry to have to commence by reading a note from Mr. W. R. Chester, who had been invited to attend the meeting, saying that he was prevented from doing so by a previous engagement. As president of the Sulphate of Ammonia Manufacturers' Association, any remarks from Mr. Chester would have greatly added to the interest of the evening, as he (the chairman) had decided to address the meeting on

THE POSITION OF SULPHATE OF AMMONIA.

Mr. Carulla referred to the letter signed "Nitrogen" which appeared in the *Chemical Trade Journal* of the 15th of last August, and in which the present undesirable position of this product is attributed to the inroad of nitrate of soda made possible by the offer of £1,000 for an essay to praise the virtues of nitrate some 16 or 18 years ago. He went on to say that it could not be questioned that the literature that arose round this prize must have benefited the nitrate of soda industry, but the effect in any case had been gradual, and they must remember that comparatively low prices were experienced in the sulphate market long before the prize essay. In 1867, for example he took the figures of Messrs. Bradbury and Hirsch—the average price of sulphate of ammonia was £11. 10s., from which figure it rose to £21. in 1872, coming down to £17. 2s. 6d. in 1874, rising again until 1878, when £20. 5s. per ton was realised as an average for the year. This was about the time of the nitrate essay. It would thus be seen that severe fluctuations and low prices were not unknown before its advent. Hence the value of the suggestion that sulphate makers should offer a similar prize to sing the praises of their product is questionable. The money would be better spent in disseminating the literature they already possessed amongst the farmers, to teach them the value of nitrogenous manures generally, rather than make any attempt to fall foul of nitrate of soda. The Sulphate of Ammonia Manufacturers' Association, of which his worthy colleague of Manchester, Mr. Geo. E. Davis, was hon. secretary, published an excellent pamphlet on the use of sulphate that only needed distributing with a little energy to cause surprise to those apathetic manufacturers who look with indifference on the association, forgetful of the motto, "United we stand, divided we fall." The speaker then gave figures from estimates made by M. Legrand, who calculated that Belgium uses but $\frac{1}{4}$th, Germany, $\frac{1}{20}$th, France $\frac{1}{8}$th, and England $\frac{1}{40}$th of the quantity of nitrogenous manures they might each consume with advantage. He regretted that so valuable a product should be sent abroad, especially at the very low prices that have ruled for some time past, whilst the British farmer is in sore need of such a cheap manure, now considerably more economical than nitrate of soda. It was still more to be regretted that the value of this fertiliser should be so little appreciated in England, and Mr. Carulla urged all those connected with the sulphate of ammonia interest to unite in an effort to educate the agriculturists by distributing amongst them appropriate literature. Numerous instances might be mentioned showing how widespread is this want of knowledge. One from a recent letter in the *Standard* would, he said, suffice, wherein the writer looked upon "the difficulty in manuring" as one of the practical drawbacks to the spread of small allotments, plainly indicating his opinion, so largely shared in by people who should know better, that only animal manures are of any service. Dr. Clowes, in moving a vote of thanks to the chairman for his address, hoped that the subject would be brought up for discussion at a future meeting. The proceedings then terminated. The next meeting will be held in Derby on December 16.

FIRE AT A TECHNICAL SCHOOL.—The East-end firemen were called last week to the East London Technical School at the People's Palace, Mile End-road, where the vapour of spirit coming into contact with flame had caused an outbreak of fire. The mischief was fortunately soon overcome.

Reports of Companies.

THE SULPHIDE CORPORATION, LTD.

The Earl of Kintore presided last week at a meeting of the prefe shareholders of the Sulphide Corporation (Ashcroft's process), Lim convened for the purpose of considering an arrangement for purchase of the American patents of the Sulphide Trust. The man explained that when the corporation was formed the patent were secured for the treatment of sulphide ores in all parts of the w exclusive of North America and South America. The Sulphide T who were the vendors and owners of the American patents, co plated disposing of the American rights to a separate company, few months ago negotiations were opened with this corporation fo sale to them of those rights. The result of the negotiations wa arrangement which the directors now submitted for the shareho approval. They were of opinion that the proposed purchase w every way a most satisfactory one, and they recommended confidence its confirmation. The terms of the sale were as follow The corporation was to issue to the Sulphide Trust 50,000 pref shares, in consideration of which the coporation was to receive £5 in cash, being the par value of the preference shares. In addi the Trust was also to be allotted 50,000 ordinary shares. Both were to rank *pari passu* with the existing 500,000 preference 500,000 ordinary shares, which formed the original capital o corporation. The advantages to be derived from their holdin whole of the patent rights must be manifest to the shareholders, an board felt certain that the bargain, so far as this corporation was cerned, was a good one. No decision had yet been come to as method to be adopted for turning it to account, and he thought it wou wise to defer taking any action in that direction until their works in active operation. It was well known that in America—both N and South—immense bodies of sulphide ore existed, which hit could not be treated in a commercially successful way, but so soo the value of their process became known the board had little d that applications would be received from many quarters for the rig use it. It had been suggested that if the shares had been offere the shareholders they would have readily taken them up, but the ditions of sale stipulated by the vendors were as he had already sta and he need hardly point out that the vendors showed unbounded confidence in the undertaking by investing practicall additional £50,000. in the concern over and above the large s they already had. Since the statutory meeting was held February last a suitable site had been obtained in Australia for works, which it was expected would be in operation in January n At their mine at Broken Hill a concentrating plant had been ere capable of treating 3,000 tons a week, which would produce 750 of concentrates. The local directors advised that from those concentr alone, which could be readily sold, a profit of £100,000. per annum w be derived, and from their inquiries in Europe the board had reaso believe that that sum would be largely exceeded. He conclu by moving a resolution for creating 50,000 new preferen shares of £1. each. Mr. J. H. Lukach seconded the motion, wh was agreed to. A meeting of the ordinary shareholders was afterwa held at which it was resolved to increase the capital of the company £1,100,000 by the creation of 50,000 new preference shares of each, and 50,000 new ordinary shares of £1. each.

STANDARD OIL COMPANY OF GALICIA, LTD.

An extraordinary general meeting was held on Monday at Cann street Hotel, London, to receive a statement from the Board as to position and negotiations for the acquisition of the properties which company was formed to purchase. Dr. T. Cooke presided, and, alluding with regret to the sudden death of Mr. J. Berry White, th man of the company, said that all the necessary formalities for registration of the company in Austria had been complied with, and Board had no doubt that their application to the Government of th country for the necessary concession would be favourably entertain if, in view of recent developments, they decided to press for it. Wh the directors found that the amount of subscriptions for shares was sufficient to purchase the two properties mentioned in the prospect the question arose whether the shareholders' money should be return After carefully considering the question, the Board decided to proce to allotment, as they were able to obtain from the Petroleum Propert Company one of the properties on modified conditions. Subsequent a fresh scheme was laid before the Board for the acquisition of both properties, and was entertained by them, but the Petroleum Compa although they submitted it, were unable to carry into effect the propos In order to enable this company to acquire the properties a number Austrian gentlemen offered to provide capital to the extent £100,000 in return for shares. This showed that in Austrian co

mercial circles the value of the business proposed to be secured by this company was highly thought of. For certain reasons, however, the Board felt themselves unable to accept that offer. They now had the opportunity of acquiring the properties on more favourable terms than those originally offered, but they felt unable to go behind the back of the Petroleum Company, who were the first to bring the properties to their notice. They had, therefore, decided to recommend the voluntary liquidation of the company. The capital was practically intact, and towards the expenses of the liquidation, which would not be heavy, they held a deposit of £500, which was lodged with them by the Petroleum Company to meet a contingency such as had arisen. He then formally moved the voluntary liquidation of the company. Mr. C. W Heley (Dublin) seconded the resolution. After some discussion, in the course of which the Board were blamed for going to allotment with insufficient capital, the motion was carried.

THE MIDDLEWICH SALT CO., LTD.

In the Chancery Division, last week, Mr. Justice Chitty, on the application of certain debenture holders in the Middlewich Salt Co., Ltd., made an order for the appointment of a gentleman named in the affidavit to act as receiver and manager of the company as a going concern, but not to act more than six months without the leave of the court, and undertaking to give security. It was stated by counsel that the company was incorporated in 1891 with a capital of £20,000 in £10. shares, and that debentures had been issued which had now become due. The business of the company was to work salt mines in Middlewich.

DIVIDENDS.

Cape Copper Company (Limited).—The directors have declared a dividend of 3s. per share on the ordinary shares, tax free, payable on January 1.

Anglo-Chilian Nitrate and Railway Company (Limited).—The directors have resolved to make an interim payment of 3¼ per cent., or 7s. per share. on account of dividend on the preference shares.

London Nitrate Company (Limited).—The directors of the company have declared a dividend of 8 per cent. on the preference shares.

Cassel Gold Extracting Company (Limited).—The directors of the company have resolved to recommend the payment of a dividend for the year ending 30th September last at the rate of 5 per cent., payable in fully paid £1. shares of the New Zealand Crown Mines Company (Limited), calculated at *par*, free of income tax, and subject to audit.

THE ELECTROLYSIS OF SODIUM AND POTASSIUM CHLORIDES.

A RATHER rash individual has recently called down upon himself the wrath of Dr. G. Lunge, of the Technological Department of the Zurich Polytechnicum, by declaring that France and Germany have lagged behind England in applying electricity to the manufacture of soda and bleach on a commercial scale. It is, we are afraid, only too obvious to those who know the facts, that this individual's zeal for English supremacy in this newly-developed industry outran his discretion. In this country, as yet, the manufacture of caustic soda and chlorine by electrolytic methods has hardly begun; and though one works, namely, that of the Electro-Chemical Company, who operate the patents of Richardson and Holland, has been in activity over 12 months, there have been so many breakdowns with their machinery that little electrolytic soda or bleach has been put on the market. However, the coming year will witness, it is hoped, the commencement of manufacture at the Weston Point works of the Castner-Kellner Company, which are being planned upon a scale capable of producing caustic alkalies and chlorine in much larger quantities than any existing Continental works. Meanwhile it may be advisable to devote a small space to an account of what has already been achieved abroad as stated in Dr. Lunge's article in the *Zeit. f. Angw. Chemie.*

To begin with, it is noteworthy that whilst here in England the electrolysis of sodium chloride for production of caustic soda and chlorine has been the aim of all inventors and patentees in this branch of applied science, abroad it has been the potassium salt which has attracted most attention. Thus it happens that the French have practically a monopoly of the manufacture of chlorate of potash by electrolytic methods, and the Germans a similar monopoly of the caustic potash manufacture. The causes of these variations in the article produced are to be found in the commercial aspect of the question. Caustic potash has only a limited field of consumption; the greater part of the production is taken by the chemical and drug dealers for distribution to the laboratories of the four corners of the globe, and a proportion of the remainder is used for the production of other potash salts. Germany has obtained practically a monopoly of this manufacture of fine chemicals for laboratory use; and hence it is natural that caustic potash, rather than caustic soda, should be the first thought of those who were planning these electrolytic plants in Germany. It is not quite so clear why the French should have devoted their energies in this direction to the production of chlorate of potash. This chemical is chiefly used for matches, and no doubt it commands on both sides of the Rhine a ready market, and one which railway and shipping freights prohibit to the English manufacturer.

As regards the manufacture of chlorate of potash from potassium chloride by electrolysis, Dr. Lunge gives the following information:—In 1889 he had the opportunity of inspecting the works of Messrs. Gall and Montlaur, at Villers-sur-Hermes. These he found to be well planned and working satisfactorily. In 1891 a large plant, using the same process of manufacture, was started at Vallorbe, in Switzerland. Its capacity has since that date been doubled, and it is now using 3,000 h.p. for the production of potassium chlorate. A third works, under the same company, is now building at St. Jean-de-Maurienne, in Savoy.

Turning now our attention to Germany, and the manufacture of caustic potash, we find that so long ago as 1884, three German chemical firms united in carrying on experimental work in the production of caustic alkalies by the electrolysis of salt solutions. These experiments suffered many hindrances, but they finally resulted in a plant equipped with 200 h.p., being built in 1889 at Frankfort-on-the-Maine.

This plant commenced work in 1890, and with such success that in 1892 it was doubled in size. Dr. Lunge visited it in that year, and convinced himself of its success by inspecting the plant and the books. A limited liability company was now formed to float other similar works in Germany and abroad; and under the auspices of this company, known as "Deu. Chem Fabrik Elektron Act Gesellschaft," three works have been planned in Germany and two abroad. The first of these was built at Bitterfeld, in Saxony; it commenced work in 1894, and was doubled in size in 1895. The Pioneer works at Frankfort has entered into an arrangement with all the subsidiary works for the sale of their products, apparently with a view to keeping up the prices. One cannot doubt therefore, after perusal of these remarks by Dr. Lunge upon the industrial development of electrolytic methods abroad, that France and Germany have been first in the field, and that whilst here in England we have been experimenting on a small scale, and, as Mr. James Swinburne says, every inventor has been christening with his name some remarkable and wonderful cell, abroad they have for once been much more practical, and, without any remarkable cells, have produced working results.

Turning now to prospects of the three processes which will shortly be at work in this country—"the Richardson and Holland," "the Castner-Kellner," and "the Hargreaves-Bird"—it must be remarked that the manufacture of caustic soda by electrolysis cannot theoretically yield so great a profit as the manufacture of caustic potash. This is partly due to the relation between the atomic weight of sodium and potassium. These are in the ratio of 23 : 39 or 1 : 1·7, and hence the same number of coulombs causes the separation of 1·7 times more potassium at the cathode than it could separate if sodium chloride were the electrolyte, and sodium were deposited and transformed into sodium hydrate.

This gives the electrolytic process of potash manufacture an advantage over the old method, which the electrolytic soda process will not enjoy. But apart from this, the figures given by the inventors of the various processes still leave sufficient margin of profit to make these ventures a success, if the experimental results are borne out by the commercial working of the processes. For this we shall not have to wait long in the case of the largest and most powerfully supported company, namely, the Castner-Kellner Company; and it is to be hoped, both for the sake of the shareholders and the workers generally in the chemical trade, that the expectations of its promoters may be fully realised, and that it may do something to revive the drooping fortunes of the once flourishing English alkali industry.—*The Electrician.*

Personal.—We are informed by Mr. Clayton Beadle, of the Rookery, Belvedere, Kent, that he has dissolved partnership with Messrs. C. F. Cross and E. J. Bevan, of London, and that his place of business will for the future be 60, West-street, Erith, Kent, where he will practice as a consulting chemist.

Manchester Chemical Club.—The first smoking concert of the session 1896-7 will be held at the clubrooms, Victoria Hotel, Manchester, on Friday, December 18, 1896, at 8 p.m. prompt. The programme has been arranged, and will be under the direction of Mr. Chas. Truby. Notice is also given that, by the courtesy of Sir Reader Lack, the members of the Manchester Chemical Club have at their disposal all the official literature relating to English patents (with the exception of complete specifications). The additions to the club library include some recent works on chemistry, etc., the official guides of the chief railway companies, and catalogues of leading manufacturers of materials, etc., required in the practice of chemists, civil engineers, etc.

THE ELECTRICAL REDUCTION OF MANGANESE ORES.

THE reduction of oxide of manganese, which was formerly a tedious and difficult process, can be effected in a few minutes in the electric furnace. M. Henri Moissan gives the following particulars of the process in the *Annales de Chemie et de Physique* :—Pure protoxide of manganese was mixed with carbon, and heated in an arc of 3·0 amperes at 60 volts. In five or six minutes a complete reduction had been effected, and a button weighing from 100 to 120 grammes remained at the bottom of the crucible. The reduction can be made with only a 100-ampere 50 volt arc ; it then takes 10 to 15 minutes. Operating with excess of carbon, the following analyses were made of the metal obtained:—

	1.	2.	3.	4.
Manganese	85·00	85·82	90·60	94·06
Carbon	14·59	13·98	10·20	6·35

If the reduction takes place in presence of an excess of oxide, the quantity of carbon is much less ; and in some experiments only 4 to 5 per cent. of carbon were obtained.

Cast manganese, when prepared in this way, can be kept in open jars if it contains little carbon ; but when the proportion of carbon increases, the moisture of the air decomposes it at once. Small fragments placed in water oxidise in 24 hours, giving off a gaseous mixture of hydrogen and carbide of hydrogen. The decomposition in air is more active as the proportion of carbon approaches that of the carbide of manganese, CMn_8, discovered by MM. Troost and Hautefeuille.

When preparing a great quantity of metallic manganese, by means of a more powerful arc, the yield is diminished by a quantity of the metal being volatilised. To prevent this I have heated the mixture in a carbon crucible with a cover. Under these conditions I have obtained metallic buttons weighing from 400 to 500 grammes, and containing from 95·20 per cent. o fmanganese and 4·50 per cent. of carbon, to 96·12 per cent. of manganese and 3·60 per cent. of carbon. This cast manganese, when heated in the forge in oxide dust, is superficially refined, and a soft metal, which can be filed easily, is produced. When manganese contains no carbon it will not scratch glass.

Starting with natural manganese binoxide, as pure as possible (97·5 per cent.), mixed with carbon and previously calcined by Perrot's method, I obtained, with currents of 500 amperes at 50 volts in a closed crucible, an ingot of the following composition :—

	1.	2.
Manganese	89·78	91·13
Carbon	7·59	6·41
Slag.....	2·06	1·78

Thus 96 per cent. of the oxide used in the experiment was reduced. I think that this reaction is easy applicable to the commercial preparation of metallic manganese, and as the molten metal can very well be refined in an excess of oxide, manganese free from carbon and silicon can be obtained.

THE SALT SUBSIDENCES COMPENSATION BOARD.

THE first meeting of the Salt District Compensation Board, whose business it will be to adjudicate upon claims for damage occasioned by brine pumping, was held at the Urban Council Offices, Northwich, last week. By the formation of this Board—which consists of three representatives of the brine pumpers, three members of the County Council, two members of the Northwich Urban and one of the Northwich Rural Council—a remarkable struggle is brought to a conclusion. For over 100 years it has been recognised that wherever brine, which is the foundation of the salt and chemical industries, was pumped, subsidence of land and houses was inevitable Within the past 50 years the Northwich district has suffered incalculable damage. Houses have fallen into hopeless ruin, roads have been swept away, and at Marston and Wincham an extensive lake marks the spot where green grass formerly grew. In 1881 a private Bill was introduced into Parliament to provide redress for the loss sustained by the owners of property. The measure met with strenuous opposition from the brine pumpers, who called scientific evidence to prove that if they abstained from pumping the sinkage would continue. The Bill, which cost the property owners £3,000 , was lost. After this, attention was turned to the desirability of obtaining a Royal Commission. Members of both Houses, the President of the Local Government Board, and other prominent men were interviewed ; but time went on, and the solution of the difficulty seemed as remote as ever, until 1890, when Sir (then Mr.) J. T. Brunner, the member for the Northwich division, suggested that he should bring in a public Bill. The measure was framed, money was raised by voluntary subscription, and another great fight took place. This time the suffering property owners were successful, and *they obtained an Act which provided* that the pumpers should pay for all damage, providing that the maximum tax did not exceed 3d. p thousand gallons pumped. It was quickly found that th Act contained clauses which would involve litigation. T make it operative it was necessary to apply to th Local Government Board for a provisional order declaring a certa district a compensation area, and this order had to be confirmed b Parliament. The application was made in 1892, and an order w issued declaring the whole of Cheshire a compensation district. Whe this came before the Parliamentary Committee the Salt Union we supported in their opposition by the towns of Winsford, Middlewich and Sandbach, who objected to pay for damage at Northwich. The res was that the provisional order was thrown out, and the property owne were left without redress. The following year the Local Governme Board were asked to define a fresh district. An inquiry was held, an a provisional order brought in. There was still opposition from th salt proprietors and the towns mentioned ; but, to prevent the measu being hopelessly wrecked, the Committee obtained authority fro Parliament to curtail the district so as to leave out the hostile town Nothing remained but to form a compensation Board, out of whe funds, fortunately, the property owners are to be repaid the £5,00 spent in obtaining the Act. At the meeting last week, on the prop sition of Mr. Hardie, seconded by Mr. Philip Speakman, Sir Jose Verdin was appointed chairman of the Board ; Mr. Harry Thorn was chosen as vice-chairman.—Notices of claims from 171 prope owners, representing 654 buildings and a rateable value of £11,12 were handed in. It was decided that the property owners should asked to send in detailed statements of damage before the 1st of Ma next. Four applications were received for the position of surveyor a valuer of claims, and Mr. E. T. Ward, C.E., of Northwich, w appointed, his salary for the first year, in which the work will heavier than subsequently, to be £200. and out-of-pocket expens Mr. Algernon Fletcher was chosen as solicitor to the Board, remuneration to be fixed at the end of the year, and Mr. J. A. Cow (deputy clerk to the Northwich Urban Council) was appointed cle at a salary of £100. per annum.

A LARGE CHLORIDE STORAGE BATTERY.

AN interesting addition has lately been made to the capacity of t Manchester Corporation Electric Light Works by the erection a large storage battery. The battery has been placed in the immedia vicinity of Hunt's Bank, at a distance of one mile from the generati station, and is charged from the ordinary distributing mains of t existing five-wire system. At the battery sub-station a motor generat is employed to give the requisite addition to the ordinary pressure supply that is necessary to overcome the back electromotive force of t cells The motor-generator is designed to carry the normal charg current of 300 amperes, and raise it from 410 to 590 volts The batte has been supplied and erected by the Chloride Electrical Stora Syndicate, and consists of 224 "R" type cells. The containing ve are of stout sheet lead, and are carried on iron and timber stands, a the battery is insulated throughout by means of duplex oil insulato The plates are supported in the cells by means of glass side plates hangers, and separated from each other by solid glass rods. Th frame of each plate is cast with an extension lug, which is homogen ously burnt with the corresponding lug of opposite polarity of the ne cell on to a continuous lead of T section, which runs between each ce supported on porcelain oil insulators The battery is sub-divided in four distinct batteries, each consisting of 56 cells, and is coupl on to the five-wire network of mains. Each of the batter so formed is again sub-divided into two parts, one part consisti of the battery proper of 44 cells, the other the regulating porti consisting of 12 cells. The connections between the regulating ce and the switchboard are made by means of solid copper rods carri round the wall on porcelain insulators fixed in iron supports, specia designed for the work by Mr. C. H. Wordingham, the Corporation electrical engineer, to whom is also due the general design an arrangement throughout. The electrical details of the battery are a follows :—The normal maximum rate of discharge is 600 amperes fro each of the four batteries, or a total of 2,400 amperes at 100 vol delivered in the mains, the normal rate of discharge is 300 ampere from each battery, and under the latter conditions the total watt-ho capacity of the battery reaches 1,250,000 watt-hours. The norm charging current is 300 amperes. The above figures show what a h reserve the battery (the largest individual one, we believe, in t United Kingdom) forms to the Manchester station, and on more th one occasion since the battery was brought into operation its value h been demonstrated. The whole night load after midnight is taken f the battery, and has enabled the third shift of hands, viz., 10 p.m. 6 a.m , to be almost entirely dispensed with, while on Sundays rel is also given to the second shift, the battery taking the day load up 4 p.m. in addition to the previous night load. The battery is erect in five archways under the main roadway.

Correspondence.

We do not hold ourselves responsible for the opinions expressed by our correspondents.

THE PATENT OFFICE.

(To the Editor of the Chemical Trade Journal.)

—It may be presumed that ever since patents were first granted Government for monopolies there has been some grumbling at ıner in which they are granted, and as the natural tendency of glishman is to grumble at his governors and the manner in which their work, it may be presumed that if a new Patent Law, ing the suggestions that have been made by various persons ne to time, were passed to-morrow somebody would be found to the next day; the truth being that no Act which may be or regulations which may be made, will exactly meet every at may occur. There is a tendency at present among the ers to institute comparisons between the methods of the British, an, and German Patent Offices, as to the manner in which they atents to applicants, as a rule much to the disparagement of the he three. Much is made of the fact that many British Patents wed to lapse at the end of the first period for which payment is nd that the validity of a British Patent is not assured by its ranted, but often has to be fought out at great expense by the e.

parison is frequently made between the cost of British and an Patents. A table, showing these comparions, appeared in *urnal* last week.

here is a question I would like to ask, and that is, are the s of the German and American offices so superior to the British ought to copy them?

main point of difference is in the character of the examination h the Patent Offices subject the specifications. In this country inly confined to seeing that it is worded in a legal manner, that not cover more than one subject of patentable matter, and that ms are in accordance with the subject matter of the specification. portant to note that the first fees asked by the Patent Office are ll, and that the office does not as a rule run the patentee into her expense; while it is to be noted that in the ordinary course is obtained in about twelve months from the date of the first ion for it, a much shorter time than is taken by the German erican offices.

ermany the Patent Office makes a further examination to see the invention has been anticipated or not. This is done with less success, generally less rather than more, while the constant nt among English patentees is that the German Patent Office is rtial in its administration, and if it gets the least chance will patent to a British patentee, while it will grant one for the vention to a German patentee.

working methods of the American Patent Office, like everything cerned with American law, appears to be designed to employ y officials as possible, and to find work for as many lawyers as . Now, it should be noted that while a patentee may obtain a patent without the necessity of employing a patent agent or a in America it is necessary to do so, and therefore it is needful o the Patent Office charges the lawyer's or patent agent's fees ng any comparison with patent fees in this country.

tent specification in America goes before an examiner, who for any possible anticipations thereof, and on whose report a nay be refused or granted, subject to certain amendments he gest. Certainly the patentee has the right of appeal to another ending examiner, but if he exercises this right of appeal then he y more fees to his patent agents, etc. If, again, this second r refuses the patent, there is still the right of appeal to the Chief sioner, and now it becomes necessary to employ counsel to e case before him. If in the end the patent is granted, probably ts will be mounted up to £300. or £400., as I have known do, and perhaps four or five years have elapsed before the is granted, which is so much of the life of the patent gone. re, there is a possibility, and that not a remote one, of an n patent costing far more than an English patent ere the s actually granted.

ome people will and do say that when an American patent is its validity is indisputable. But is it? American patents are ently upset as British patents. While cases are not by any uncommon where the American patentee has lost his patent he adopted the amendments made by the American Patent xaminer, whereas if he had not done so his patent would have good one. Certainly, I should not like to see the American with its possibilities of great expense to the patentee, and its ndedness, imported wholesale into this country.

I have touched on these p ints, not because I think the British Patent Office perfect, or to be incapable of improvement, but to show that the much-vaunted German and American offices are not so perfect as they are often thought to be —I am, yours, &c, T. G. R.

Trade Notes.

THE KENT COALFIELDS.—In the *Financial News* "Midas" says: "Several inquiries have reached me about Kent coalfields, in which there have recently been very active dealings at steadily-rising prices. From all that I can learn, the prospects of the enterprise are excellent, and the developments so far made justify considerably higher prices for the shares. It is quite probable that Kent coalfields will be a feature of the market during the coming year."

THE RIVER WEAVER TRUST —The annual meeting of the River Weaver Trust was held at Northwich last week. For the first time since its formation in 1721 the press were invited. The financial statement showed receipts during the year amounting to nearly £52,000., £721. in excess of the expenditure, which included £16,000 interest and annuity repayments. The Trust is contemplating important improvements to the navigation, and will spend £25,000. in swing bridges at Northwich.

COMPENSATION FOR SALT SUBSIDENCES.—On Wednesday evening, Sir John T. Brunner, M.P., was entertained to a banquet at Northwich in recognition of his services in obtaining compensation for injury to property due to salt subsidences. In responding to the toast of his health, Sir John Brunner said that when he established chemical works at Northwich nineteen years ago he came to the conclusron that Cheshire required compensation for subsidence, and a reformation of the Weaver Trust. Both objects had been achieved.

POWER FROM LIQUID FUEL.—In connection with the general mining plant and milling stamps that are being built by Messrs. Fraser and Chalmers, Limited, of Erith, for the Northern Territory Goldfields Company, we learn that the power plant for actuating the mill is being supplied by the Liquid Fuel Company of East Cowes, Isle of Wight, The directors recently visited the works of John Fowler and Co., Leeds, and there viewed three sets of winding and pumping, and one set of pumping plant, each of 16 nominal horse-power. In the three sets of winding and pumping plant liquid fuel is to be used on Holden's patent principle; the pumping plant is to be driven with wood as fuel.

IRON AND STEEL PLANT COMPANY, LIMITED.—As notified in a recent issue the discounts of this company have been revised. The following particulars now apply to trade discounts to manufacturing chemists, boiler fluid makers, wholesale oil merchants, &c.:—Steel barrels, black state or coated, steel drums, brass or iron bungs and vents fitted to barrel, 15%, or 25% in lots of not less than six. All prices are f.o.r., Barrow-in-Furness, but lots of not less than one dozen barrels or drums delivered f.o.r.. any railway station in England free. A further discount of 5%, 7½%, and 10% will be allowed off barrels and drums, according to the size of barrel and the number ordered. In addition to this the following cash discounts are allowed:—5% for cash with order, 3% for cash on delivery, 2½% on monthly accounts. Interest will be charged on overdue accounts. All inquiries, orders, and cheques to be sent direct to the London office, 3, Crown-court, Old Broad-street, E.C., unless otherwise requested. The company also wish to announee that all previous lists are cancelled; and that present discounts are subject to alteration without notice.

THE MANCHESTER SLUDGE STEAMER.—At the meeting of the Manchester City Council on Wednesday the minutes of the Rivers Committee contained the announcement that a tender, amounting to £25,000., had been accepted for the construction of a sludge steamer, in accordance with the specification of the city surveyor. Mr. Hassall asked whether the Rivers Committee had ever been offered £1,000. per annum for the use of the sludge which it was now proposed to send out to sea on board the £25,000. steamer. Mr Alderman Joseph Thompson, chairman of the Rivers Committee, replied that such an offer was made, but the conditions were such that the offer could not be entertained for one moment. He moved that the report of the Rivers Committee, already in the hands of members of the Council, be entered on the minutes. The report, he said, would require careful consideration, and he did not wish to submit any resolution with regard to it at the present time. He described events relating to the state of the rivers and the sewage in times anterior to those dealt with in the present report, and emphasised the fact that the report made no proposal with regard to the relief of the Medlock in the event of floods. The former city surveyor, Mr. Allison, thought that such provision was not required, but the present city surveyor anticipated even greater danger from floods than there had been in the past. The report was entered on the minutes.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Tar products are rather unsettled. Benzols are quoted lower, with 90's at 3s. 9d. prompt, and 3s. 6d. to the end of the year; 50/90's stand at 2s. 9d. to 2s. 10½d. prompt, Jan.-March, 2s. 6d. There is no alteration in the prices of carbolic acids, both crystals and crude remaining as last quoted. Crude naphtha still stands at 1s. 3d., and solvent, being scarce, at 1s. 8d. Anthracene quiet. Creosote firmer, at 2d. Pitch is without improvement, quotations being erratic.

Sulphate of ammonia is quiet, and, as far as quotations are concerned, weaker. There is, however, little first hand business doing. The scarcity of consumers' orders is causing makers to evince more desire to sell, but they are hardly prepared to concede all that is asked in the matter of price. Nearest quotations are:—Beckton £8, London outside makes £7. 12s. 6d. to £7. 15s., Liverpool £7. 12s 6d., Hull £7. 10s. and Leith £7. 7s. 6d. to £7. 10s.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is fairly brisk, with good home trade and export enquiry. There are no changes in values of any consequence, bleaching powder selling freely and prices steady at £6. 10s f.o.r. softwoods, and £6. 12s. 6d. to £6. 15s. f.o.b. hardwoods. Chlorates are without change. Potash, at 4d; and soda, 5d. per lb. For caustic soda there is rather a better general demand, and prices are steady for prompt and early delivery. Current quotations f.o b. Liverpool, are as follows:—77%, £9.; 74%, £8.; 70%, £7. 2s. 6d.; 60%, £6. 2s. 6d., 10-ton lots and upwards. Ammonia alkali steady at £3. 7s. 6d. bags f o r., but there is not much business doing. Sulphate of copper is dearer at £17. 10s to £17. 15s. f.o.b., with active demand as usual at this season. Recovered sulphur firm at £4. 12s. 6d. to £4. 15s. f.o.r. Saltcake in better request at 20s to 22s f.o.r. In potash, caustic and carbonate, there is a fairly good business being done, and prices are firm both for prompt and forward deliveries. Borax is again easier at £19 10s. White arsenic in strong demand, and with limited supply prices advanced to £24. f.o.r. Garston. Brown acetate of lime maintains the higher price for prompt delivery. Bichrome unchanged. Yellow prussiate, 5⅜d. to 5¾d. Sulphocyanides quiet and unchanged in value. Muriate of ammonia continues to offer at rather lower rates. Other ammonia salts are steady. Aniline oil and salt are lower. Carbolic acids firm both for present and forward deliveries. Sulphate of iron still scarce, and in good request at the higher price.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed at 48s. 7½d., Middlesbrough 40s. 7½d. cash, and hematite 50s. 9½d. Copper, steady: Chili bars, G. O. B.'s and G. M. B's., closed at £48. 12s. 6d. to £48. 17s. 6d. cash, and £49. 5s. to £49. 10s. three months. Tin, quiet: Straits closed at £58. 1s. 3d. to £58. 11s. 3d. cash, and £58. 17s. 6d. to £59. 7s. 6d. three months; Australian, £59. 15s.; English ingots, £62. to £62. 10s. Lead: Spanish, £11. 12s. 6d. to £11. 13s. 9d.; English, £11. 17s. 6d. Silesian spelter, ordinary, £17. 15s. to £17. 16s. 3d. Nickel, 1s. 2½d. Antimony, £29. 10s. to £30. Quicksilver: First hands, £6. 12s. 6d.; second hands, £6. 11s. *Copper shares*, steady: Cape, 2½ to 2⅝; Copiapo, 1⅞ to 2; Libiola, 1⅞ to 2; Mason and Barry, 3⅛ to 3⅜; Rio Tinto, 24¼ to 24⅞; Tharsis, 5⅞ to 6⅛.

GLASGOW, WEDNESDAY.—Market easier, with a fair business. Scotch done at 48s. 9½d. to 48s. 8d. cash, and 49s. 0½d. to 48s. 11½d. one month; buyers, 48s. 7½d. cash; sellers, 48s. 8d. Cleveland done at 40s. 9½d. to 40s. 8d. cash; buyers, 40s. 7½d. cash. Cumberland hematite done at 51s. 2d. one month; buyers, 50s. 9¾d. cash; sellers, 50s. 10d. Middlesbrough hematite done at 49s. 2d. to 49s cash, and 49s. 6d. to 49s. 4½d. one month; buyers, 48s. 11½d. cash; sellers, 1d. more.

REPORT ON MANURE MATERIAL.

The quieter tone of the market last reported has continued throughout the week, and prices are the turn in favour of buyers. Freights being somewhat easier, there are now sellers of 75/80% Florida phosphate rock, 1897 steamer shipment, at 6d. per unit, c.i.f. to United Kingdom ports, and at the equivalent c.i.f. to Continent and Baltic. The quotation for South Carolina River rock and 58/63% Algerian remains at 5¼d. per unit, but for a good line 1897 summer shipment, it is possible that a fraction less might be accepted. There is nothing fresh reported in River Plate bones, in the absence of *cargoes offering, but if any cargo of handy size* came on the market it would no doubt find ready buyers at £3. 17s. 6d. per ton. Bomb bone meal rather hangs fire, and £3. 17s. 6d. per ton must be co sidered nearest value. Nitrate of soda is steady, at 7s. 10⅜d. per cw for ordinary quality, and 8s. per cwt. for fine quality, on spot. D cargoes are firmly held, and it is reported that there are buyers 7s. 9d. per cwt., ordinary quality.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—There is next to nothing doing in Palm oil, transactio being limited to Saltpond and Dixcove, at £17. and £15. 15s. respe tively. Olive is steady, and, considering all things, a satisfac business is doing in Seville, at £28. to £29. 10s., and Malaga, £29. 10 to £30 per tun. Linseed is considerably weaker, Liverpool mak in export casks now standing at 16s. 3d. to 17s. 6d. per cwt. accordi to quality. The position of Cottonseed is likewise weaker, pric having fallen to 16s to 16s. 6d. for Liverpool refined, and 17s. 9d. cwt. for American. Castor oil keeps steady, and good seconds Calco has been moving off more freely at 3¾d. for spot. First Pressure Fren and Madras, however, continue quiet at 3½d. per lb. Tallow is qu and unchanged. Much the same may be said about Resin; the demand fairly good, and prices as firmly maintained as ever. Spirits of turpe tine are dull, despite a marked decline in values, there being sellers 20s. 9d. to 21s. per cwt. Petroleum is quieter, but prices still rem at 6⅜d. to 7¾d. for American, and Russian 5¾d. per gallon.

COLOURS.—Prices are steady, and practically without chan Ochres: Oxfordshire, common, £10., medium, £12., best, £ Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, be 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £ Red lead unchanged. Venetian red, £6. to £10. Cobalt: P pared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Comm £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Since this time last week sulphate of ammonia has not declin further, but has continued unwontedly stationary at the last price b quoted, viz., £7. 10s. to £7. 12s. 6d. prompt f.o.b. Leith. The has not been much doing, however, and the credit of the arrestment the fall is due rather to the putting down of the foot by the maki than to any improvement in the demand. There has been nothing all moving as regards forward delivery business. Bichromate of pota and bichromate of soda, the production of which is almost solely co fined to Glasgow and neighbourhood, is thought to have slight improved since the American election crisis subsided, and t makers' agreement prices as here given are well held. The gener market remains very idle and languid, though prices are kept at t late figures, nominally at least. Shale products unchanged, with lab cants firm, and the others still depressed as to value.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyn soda ash, 48/52°, £4. 2s. 6d. to £4. 7s. 6d. nett, Tyne; white alkal 48/52°, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5 5 nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 5s., 60/6 £6. 5s., and cream 60/62° £6., all nett, Liverpool; bleachi powder, £6. 12s. 6d. nett, Tyne; saltcake, 20s.; borax, Engli refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool bichromate of potash, 4½d. nett, for Scotch and English deliveries (f export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, f Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow) chlorate of potash, 4d. less 5%, any port; nitrate of soda, 7s. 10½d to 8s.; sulphate of ammonia, £7. 10s. to £7. 15s. prompt, f.a. Leith; salammoniac, first and second white, £37. and £35. ne any port; sulphate of copper, £17. less 5%, Liverpool; paraffi scale, hard, 1⅞d. to 1¾d., and soft, 1½d. to 1⅝d. per lb. paraffin wax, 120° semi-refined, 1⅝d. to 2⅛d. per lb.; paraffin spir (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¾d., st crystal, 6½d., at Glasgow and other big centres, for Scotch buye (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £ Week's imports of sugar at Greenock were nil.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The markets continue very easy, with little prospect of a advance upon Hull made oils, owing principally to the very lar imports. The imports during the week of linseed have amounted 27,758 quarters, viz., from Peman 9,345 quarters, from Tagana 7,850 quarters, from Odessa 2,576 quarters, from Memel 2,439 quarte

St. Petersburg 1,945 quarters, from Reval 1,133 quarters, from u 620 quarters, from Konigsberg 500 quarters, from New York 0 quarters, and 620 quarters other ports. Linseed oil has declined t 5s per ton, closing steady at 14s. 4½d. per cwt., naked spot; ember, 14s. 7½d. to 14s. 9d.; January-April, 15s 3d.; and May-ust, 15s. 9d. Boiled and refined, £1. to £2. per ton extra. ort for the week has been 1,800 cwts. The imports of cottonseed g the week have been 2,789 tons from Alexandria. Refined on oil also 5s. per ton lower, closing with sellers at 13s. 6d. per , naked spot; December-April offer at 14s. per cwt. Casks £1., ordinary barrels 30s. per ton extra. The export during the week been 55,780 cwts, a large portion of which has been taken from :. Olive oil not great in demand, Malaga and Gallipoli being ce and dear. Turpentine, 21s. 3d. per cwt. Bone grease un-ged, at £16. 15s. per ton. Cod oil, £16. to £19. per ton. nes, 94% to 97% fatty acids: White, £19. 10s; pale, £18. 5s.; rn, £17. 5s. per ton. Olive oil soap (Italian), 60% fatty acids, per ton. Yorkshire Grease: The Americans have been buying ly, and is scarce and dearer, from £9 per ton, f.o.b. Hull.

AKES.—Linseed cakes quiet; 95% pure, £6. 7s. 6d. Oilcakes, 7s. 6d. Cotton Cakes: Fresh orders scarce. Marseilles cakes yptian seed) now due at Lynn offer at £4. 2s. 6d., delivered there; and the heavy accumulating stocks and declining prices of feeding n in Hull and elsewhere stand against new orders for cakes: Best es, £4. 7s. 6d.; seconds, £4. 5s. spot, and £3. 15s. to £3. 6d. Dec.-April. Rape cakes unchanged.

AINTS.—The situation and prices are unchanged. There are a l many inquiries about for next year's contracts.

TYNE CHEMICAL REPORT.

TUESDAY.

hemicals are very dull, and there is no alteration to report in prices. hur continues scarce at £5. per ton. Caustic soda, 76/77%, £9. 9. 5s. per ton; and 70%, £7. 10s. to £7. 15s. per ton. Soda als, £2. 2s 6d. per ton, gross weight, locally.

eaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton, ; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 10s. ton, nett; recovered sulphur, 2 cwt. bags, £5. per ton. ; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. er ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, 7s 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; sulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. , £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, ; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; ate of potash, 5d. per lb., less 6%; pearl hardening, per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. on, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, ed crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. on nett; sulphide of barium, crystals, £4. 15s. per ton, nett; onate of alumina, £30. per ton, nett; aluminate of soda, £30. on, nett.

ALT.—South Durham salt is steady at 9s. per ton, f.o.b. Tees.

OALS.—Trade is again very quiet as regards the export business. ally Durham coals are firm, and with coke and gas coals is in good and. To-day's prices are:—Best Northumbrian steam, 7s. 6d. to d. per ton; second qualities, 7s. 9d. to 7s. 3d. per ton; small n, 3s. 6d. to 4s. per ton. Bunker coals, 6s. 6d. to 7s. per ton. coals, 6s. 9d. to 7s. per ton. Household coals, 10s. to 11s. per Coke, firm, 14s. to 15s. per ton.

New Companies.

ictoria Lead Co., Ltd.—CAPITAL £2,000, in shares of £5. each. company has been formed to carry on the business of lead, tin, position or other pipe manufacturers.

Cervantes Zinc Syndicate, Ltd.—CAPITAL £25,000., in shares of £1. each. This company has been formed to acquire and develop the Cervantes Zinc Mine, Santander, Spain. The subscribers to the memorandum of association are:—T. F. Smith, 46, South Hill Park, Hampstead, accountant; C. Weylandt, 6-7, Coleman-street, E.C., merchant; R. B. Robinson, 2, Pinner's Court, E.C., merchant; E. J. Reinganum, 75, Comeragh-road, W., clerk; J. Nordinam, 15, Ampthill Square, N.W. clerk; A. T. Stanley, 60, Gresham-street, E.C., stationer; W. J. Tubby, 242, New North-road, N, stationer.

Egyptian Petroleum Co., Ltd.—CAPITAL £120,000., in £1. shares. This company has been formed to work petroleum deposits in Egypt, and to produce, refine, store, and sell the same. The subscribers to the memorandum of association are:—W. Escott, 29, Powell-road, Clapham, N.E, gentleman; W. F. Smart, 25, Spencer-road, Herne Hill, S.E., gentleman; S. Jordan, 13, Callow-street, Chelsea, S.W., gentleman; C. T. Lissenden, 34, Alfred-street, Bermondsey, S E., gentleman; T. J. Bowles, 27, Upper Marylebone-street, S.W., gentleman; H. Baker, 119, Brayard's-road, Peckham, S.E., gentleman; A. W. N. Stuart, 46, Ronald's-road, Highbury, N., accountant.

Fisher and Co., Ltd.—CAPITAL £120,000, in shares of £10. each. This company has been formed to acquire the business of paper manufacturers, &c., now carried on at Kettlebrook Mills, Tamworth. The subscribers to the memorandum of association are:—H. Fisher, 90, Piccadilly, W., gentleman; S. Fisher, Amington Hall, Tamworth, paper manufacturer; W. Dobson, Kettlebrook, Tamworth, paper manufacturer; Mrs. A. L. Fisher, Amington Hall, Tamworth; F. W. Dobson, Barrow-on-Trent, Derby, paper manufacturer; A. G. Dobson, Kettlebrook, Tamworth, paper manufacturer; Mrs. F. Fisher, Riffhams, Danbury, Chelmsford.

J. Curtis and Co, Ltd.—CAPITAL £40,000., in shares of £10. each. This company has been formed to acquire and carry on the business of seed crushers and oilcake manufacturers. The subscribers to the memorandum of association are:—J. Curtis, 3, Cotham Park, Bristol, seed crusher; Mrs. J. Curtis, 3, Cotham Park, Bristol; F. G. Curtis, 3, Cotham Park, Bristol, clerk; Mrs S. A. Smith, 97, High-street, Leicester; Miss E. G. Curtis, 7, Hotel-street, Leicester; Mrs. M. Curtis, 7, Hotel-street, Leicester; Mrs. J. Simmons, 19, Severn-street, Ipswich.

United British Castor Oil Co., Ltd.—CAPITAL, £36,000. in shares of £10. each. This company has been formed to acquire and carry on the business of oil and manure manufacturers. The subscribers to the memorandum of association are:—P. M. Matthew, 32, Abercromby-place, Edinburgh, manufacturer; T. Heath, Royal Observatory, Blackford Hill, Edinburgh, assistant; G. D Wood, 50, Hanover-street, Edinburgh, butcher; G. Russell, 4, Coates Gardens, Edinburgh, banker; H. H. Harley, W.S., Fountainhall-road, Edinburgh; W. J. Johnstone, 61, Frederick-street, Edinburgh, solicitor; N. B. Constable, W.S., 61, Frederick-street, Edinburgh.

Pittman Paint Co., Ltd.—CAPITAL £10,000, in shares of £1. each. This company has been formed to carry on the business of oil, colour, and paint and varnish manufacturers. The subscribers to the memorandum of association are:—W. C. Hunneman, 21, Cristowe-road, Fulham, accountant; E. Footman, 61, Cheapside, E.C, accountant; A. Hickman, 51, Richmond-terrace, S.E., clerk; A. G. Hudson, 2, Earlstoke Villas, Clapham, clerk; F. L. Phillips, Alberta House, Crouch Hill, N., painter; W. Sparswick, 5, Fenchurch-street, E.C., secretary; C. H. Austin, 16, Brocklebank-road, Earlsfield, clerk.

Moulton's Soap Works, Ltd.—CAPITAL £50,000., in shares of £1. each. This company has been formed to acquire the business of soap and candle manufacturers, oil and tallow refiners, now carried on at Soho Mills, Macclesfield, by Messrs. G. J. Moulton and Co., Ltd., and to adopt an agreement with B. Fox. The subscribers to the memorandum of association are:—B. M. Whithand, 18, Cockspur-street, S.W., gentleman; T. Coote, 26, Southdown-road, Brighton, gentleman; W. Lewis, 19, Courcy-road, Horusey, N., merchant; A. E. Abrahams, 5, Avenue-road, Forest Gate, E., contractor; J. G. Hathway, 17, Osnaburgh-street, N.W., gentleman; F. H. Portway, Henning-street, Battersea, S.W., clerk; F. McDaniel, 11, Charles-street, Blackfriars, S.E, clerk.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 21st.

tic Acid—

dland,	200 pks.	Little & Johnston
,,	103	A. & M. Zimmermann
,,	150	R. W. Greeff & Co.

Acetone—

Germany,	2 drs.	W. J. Bush & Co.

Alkali—

Germany,	100 c.	J. Barber & Co.
,,	500	Spies Brs. & Co.

Ammonium Chloride—

Germany,	6 cks.	F. Allen & Sons

Ammonium Nitrate—

Germany.	40 brls.	Petri Brs.

Antimony Ore—

France,	50 t.	Smith, Sundius & Co.

Arsenic—

E. Indies,	2 cs.	L. & I. D. Jt. Co.

Asbestos—

N. Russia,	£10	Schenker & Co.
Germany,	125	Craven & Co.
Italy,	329	J. Barlow & Co.

Barytes—
Holland, 40 cks. Robertson, Jelly & Co.
" 22 W. Pope & Co.
Belgium, 200 bgs. J. L. Lyon & Co.
" 100 W. Harrison & Co.
Holland, 44 Taylor Brs.
" 262 T. & W. Farmiloe
" 157 W. Harrison & Co.

Bone Meal—
E. Indies, 200 t. A. Hunter & Co.

Bromide of Iron—
Germany, 15 cks. A. & M. Zimmermann

Bromine—
Germany, 20 cs. A. & M. Zimmermann

Camphor—
Germany, 1 ck. T. H. Lee
" 93 cs. Lewis & Peat
" 7 R. Warner & Co.

Caoutchouc—
Germany, 49 c. T. H. Lee
" 23 Wallace Brs.
France, 10 H. Johnson & Sons
Zanzibar, 25 Clarke & Smith
" 30 Major & Field
" 39 L. & I. D. Jt. Co.
Rangoon, 21 "
U. States, 27 Chautard & Christensen
France, 42 L. & I. D. Jt. Co.
Holland, 5 A. G. Lihme & Co.
Madagascar, 37 Procter Brs.

Carbolic Acid—
Germany, 104 pks. J. G. Back

Castor Oil—
Italy, 10 cs. Beresford & Co.

Caustic Potash—
France, 16 drs. Petri Brs.
Germany, 5 cs. Blondeau & Co.

Chemicals *(otherwise undescribed)*
Germany, £148 T. H. Lee
" 570 A. & M. Zimmermann
U. States, 2,600 L. & I. D. Jt. Co.
Holland, 64 Phillipps & Graves
" 49 B. & F. Wf. Co.
" 57 H. Lorenz
" 96 T. H. Lee
" 228 A. & M. Zimmermann
Germany, 372 H. Lambert
" 85 Phillipps & Graves
Holland, 150 G. Rahn & Co.
France, 13 brls. Typke & King
Germany, 342 Société John Cockerill
France, 16 Mory & Co.
Denmark, 25 Bailey & Leetham
U. States, 168 E. E. Bailes
" 330 F. Parker
Holland, 7 Little & Johnston

Copper Sulphate—
Germany, 4 cks. Charles & Fox

Cream of Tartar—
France, 23 cks. B. & F. Wf. Co.
Spain, 37 "
France, 10 W. C. Bacon & Co.
Spain, 3 "

Dextrine—
Germany, 25 cks. City Coml. Wf.
" 30 bgs. M. D. Co.

Dyestuffs—
Annatto
U. States, 1 pk. Hoare, Wilson & Co.
B. W. I., 1 bl. J. Hales, Caird & Co.
Singapore, 3 pks. Eastwood & Holt
Argols
Belgium, 88 bgs. Thames S. T. & L. Co.
Italy, 365 B. Jacob & Sons
" 230 Thames S. T. & L. Co., Ld
Cape 17 L. & I. D. Jt. Co.
Cochineal
Canaries, 12 bgs. W. M. Smith & Sons
" 3 Price, Hickman & Co.
" 5 J. W. Borland
" 16 G. S. Bruce
" 100 Sperling & Williams
" 64 Swanston & Co.
Cutch
Singapore, 100 cs. Borneo Co.
Extracts
Belgium, 25 cks. Leach & Co.
U. States, 100 bxs. W. & S. Bonditch
France, 110 pks. Bennett S. S. Co.
" 40 cks. T. H. Lee
" 320 Boutcher, Mortimore & Co.
Canada, 160 C. T. Bowring & Co.
Denmark, 1 Sorensen & Co.
Fustic
B. W. I., 3 t. L. & I. D. Jt. Co.
" 175 W. Shelcott
Gambier
Singap're, 1,260 bls. A. B. Curtis & Co.
" 1,847 Brinkmann & Co.
" 504 Adamson, Gillfillan & Co.
Indigo
E. Indies, 9 chts. Eales, Prince & Co.
" 9 Walker, Munsie & Co.
" 3 Croysdale & Co.
" 7 J. Swire & Sons
" 2 L. & I. D. Jt. Co
Holland, 6 Richardson, Spence & Co.
E. Indies, 8 Binny & Co.
" 6 Arbuthnot, Latham & Co.
Saffron
Spain, 1 cs. Hore & Scrivener
" 1 Dawson Brs.
Shumac
Italy, 950 bgs. J. Kitchin, Ld.
" 350 Bevington & Sons
Tanners' Bark
Auckland, 10 t. G. N. Souralty & Co.
Natal, 38 A. & W. Nesbitt
" 15 Flack, Chandler & Co.
N. Zealand, 61 Escombe Brs. & Co.
Valonia
A. Turkey, 20 t. Fellowes, Morton & Co.
Italy, 90 Hore & Scrivener
France, 2 Beck & Pollitzer

Farina—
Germany, 200 bgs. Hernu, Peron & Co.
Holland, 300 J. Barber & Co.
" 55 J. Knill & Co.
" 220 R. Bennett & Co.
" 50 Dunlop Brs. & Co.
" 238 T. L. Lee
" 190 H. Lorenz

Glucose—
Germany, 16 pks. 130 c. J. Knill & Co.
" 3 18 J. Barber & Co.
" 100 100 Frank & Ohlmann
U. States, 1,000 1,000 Ohlenschlager Brs.
" 350 590 Deering & Robottom
France, 200 200 Trier, Meyer & Co.
" 200 230 Robinson, Son & Co.
U. States, 550 550 Fellowes, Morton & Co.
" 100 100 L. & I. D. Jt. Co.
" 1,100 1,100 Robinson, Son & Co.
" 510 510 Humphery & Co.
" 3,000 3,000 E. Thompson & Co.
" 499 1,450 R. G. Hall & Co
" 1,000 1,020 Bellamy & Co.
" 50 300 C. Southwell & Co.
" 50 275 T. M. Duche & Sons
Germany, 50 402 Bennett S.S.Co.
" 15 136 M. D. Co.

Glue—
Austria, £26 M. D. Co.
Germany, 44 T. H. Lee
Belgium, 140 J. Barber & Co.
" 20 Becker & Wagner
Holland, 40 G. Rahn & Co.

Infusorial Earth—
Germany, 50 t. A. Haacke & Co.

Iron Oxide—
Italy, 155 sks. F. Smith

Lead Acetate—
Germany, 19 cks. R. W. Greeff & Co.
" 24 F. Boehm

Litharge—
Germany, 2 cks. H. Lambert
" 26 G. Smith & Son

Manganese—
Germany, 6 t. T. H. Lee

Manure—
U. States, 12 t. Williams, Torrey, & Co
Melbourne, 35 Low, Sons, & Co.
Belgium, 90 Poynter, Son, & Co.
Germany, 50 Perkins & Homer

Metallic Oxide—
Germany, 2 cks. Brit. Anti-Fouling Compo Co.

Methyl Alcohol—
Belgium, 8 dms. F. V. Tucker

Mica—
U. States, £110 W. Dixon
" 2,550 W. M. Smith & Sons
" 890 E. Davis & Co.

Molasses—
U. States, 150 cks. 1,000 c. A. Wright
" 519 2,876 R. G. Hall & Co.

Nickel Salts—
Germany, 7 cks. Petri Brs.

Nitre—
Chili, 12,437 bgs. W. Montgomery & Co.

Ochre—
Holland, 2 cks. H. Johnson & Sons
Spain, 60 bgs. J. L. Lyon & Co.
Holland, 28 pks. 12 cks. Phillipps & Graves
Belgium, 20 brls. T. Ronaldson & Co.

Pitch—
Germany, 78 brls C. B. Leighton
N. Russia, 300 W. F. Malcolm & Co.
U. States, 66 Dussek Brs. & Co.

Plumbago—
Ceylon, 95 cks. R. G. Hall & Co.
Germany, 17 B. Gallaway

Potassium Carbonate—
France, 42 c. J. A. Reid
Germany, 640 W. G. Blagden

Potassium Chloride—
Holland, 15 cks. H. Johnson & Sons

Potassium Sulphate—
Germany, 508 bgs. Anglo-Contl G. Wks.
" 155 Blagden, Waugh, & Co.

Rosin—
U. States, 4,135 brls. Prod. Brokers' Co.
" 5,872 F. & S. Chiesman & Co.

Saltpetre—
Germany, 20 cks. L. & I. D. Jt. Co
E. Indies, 580 bgs. Phillipps & Graves
Germany, 21 cks. J. Hall & Son
" 15 P. Hecker & Co.
Belgium 85 bgs. J. Greig

Soda—
Holland, 4,016 c. R. Waters

Sodium Sulphate—
Italy, 45 cks. Beresford & Co.

Starch—
Holland, 170 cs. Phillipps & Graves
Belgium, 80 J. Barber & Co.
" 310 T. H. Lee
" 20 Leach & Co.
" 1,000 bxs. Taylor Brs.
France, 10 brls. Bennett S. S. Co.
Holland, 140 cs. E. & T. Pink
Germany, 400 30 bgs. Seaward Brs.
Holland, 155 G. Rahn & Co.
Germany, 1,204 Horne & Co.
" 365 Phillipps & Graves
Holland, 470 Little & Johnston
Belgium, 304 F. Claydon & Co.
" 101 J. Harrison
France, 440 E. & T. Pink

Stearine—
France, 100 bgs. H. Walbaum & Tosetti
Holland, 14 cks. J. Owen
Belgium, 196 bgs. H. Hill & Sons
Holland, 339 "

Sulphur—
Italy, 18 t. G. Boor & Co.
" 800 Brandram Brs. & Co.

Tartaric Acid—
Holland, 6 pks. F. C. Devon & Co.

Ultramarine—
Holland, 6 pks. J. Barber & Co.
Germany, 10 cs. "
Holland, 5 Phillipps & Graves
Belgium, 12 brls. Leach & Co.
" 2 J. L. Lyon & Co.
Holland, 25 pks. Thames S. T. & L. Co., Ld

Varnish—
U. States, 48 pks. Pinchin, Johnson & Co.

Verdigris—
France, 10 cks. B. & F. Wf. Co.

White Lead—
Germany, 49 cks. D. Storer & Son
" 20 M. Ashby, Ld.
" 38 Randall Brs.
Holland, 40 T. & W. Farmiloe
Germany, 50 Taylor Brs.
Belgium, 4 brls. Leach & Co.

Wolfram Ore—
Germany, 5 t. C. S. Love

Wood Pulp—
Germany, 42 pks. S. E. Railway Co.
Norway, 440 W. G. Taylor & Co.
" 300 W. E. Bott & Co.
" 150 40 bls. Johnson, Jorgens
Holland, 1,400 Little & Johnston
" 1,870 E. J. & W. Goldsmid
Germany, 406 D. Friedland
Sweden, 140 W. G. Taylor & Co.
" 40 W. D. Co.
" 900 E. Ahlers
U. States, 5 L. & I. D. Jt. Co.
Belgium, 1,342 E. J. & W. Goldsmid
Sweden, 5,908 Henderson, Craig, & Co.
Germany, 49 G. S. N. Co.

Zinc Oxide—
Holland, 500 cks. Soundy & Son
U. States, 100 brls. M. Ashby, Ld.
Germany, 60 "
Holland, 150 "
" 50 J. Mason

LIVERPOOL.

Week ending November 19th.

Barytes—
Antwerp, 33 cks. 30 bgs.
Rotterdam, 52

Bone Ash—
B. Ayres, 500 bgs. W. P. Dickinson

Bone Black—
Philadelphia, 20 brls. E. F. Houghton & Co.

Borax—
Mollendo, 1,270 sks. 1,581 bgs.
" 1,030 A. S. Henry & Co.
Valparaiso, 600

Caoutchouc—
Valparaiso, 37 bls. Kleinwort, Sons & Co.
" 109 J. H. Schroder & Co.

Chemicals *(otherwise undescribed)*
Rotterdam, 4 cs.

Colours—
Antwerp, 1 cs.

Cottonseed Oil—
New York, 150 brls.

Cream of Tartar—
Barcelona, 5 cks.
Tarragona, 5 Sachse & Klemm
" 6 pps.
Lisbon, 336 bgs.
Oporto, 3

Dyestuffs—
Algarrobilla
Huasco, 729 sks. Pullman & Co.
Annatto
Bordeaux, 10 cks.
Cochineal
Gd. Canary, 9 bgs. Roberts & Woodhead
Teneriffe, 7 Keyser, Henderson & Co.
" 4 Wilson Dunnaby & Son
Cutch
Singapore, 440 bxs.

Fustic
Colon, 336 ps. W. Duranty & Son
Tampico, 1,879 W. H. Thompson & Co.
Gambier
Singapore, 2,3 6 bls. 434 bgs.
Logwood
Hamburg, 27 cks.
Myrabolams
Bimtipatam, 4,060 bgs.
Saffron
Valencia, 1 cs.
Valonia
Patras, 1 bg. T. Vocotopulos
Smyrna, 25 t. G. Essayan
,, 25
Farina—
Trieste, 100 bgs.
Stettin, 15
Flux Skimmings—
Genoa, 28 ingots
Glucose—
New York, 200 brls. T. M. Duche & Sons
Philadelphia, 50
Glue—
Antwerp, 1 ck.
Boston, 1 cs. Wills & Co.
Rotterdam, 220 bgs.
Infusorial Earth —
Hamburg, 64 bgs.
Lactic Acid—
Boston, 25 brls. 8 kgs. J. Taylor
Limestone—
Antwerp, 1 cs. 1 crt.
,, 2 J. T. Fletcher & Co.
Lithopone—
Rotterdam, 40 cks.
Manure—
Philadelphia, 162 bgs. Animal Products Co.
Molasses—
Alexandria, 1,689 cks.
Paint—
New York, qty. Bahr, Behrend & Ross
Montreal, qty. Goodlass, Wall & Co.
Paraffin Scale—
Philadelphia, 400 brls. 100 cs. Anglo-Am Oil Co., Ld.
,, 114
Baltimore, 102
Phosphate—
Antwerp, 1,900 bgs.
Phosphate Rock—
Brunswick (Georgia), 1,000 t.
Phosphorus—
Norfolk, Va., 20 cs.
Plumbago—
Genoa 100 bgs. G. Huntriss & Co.
Potash—
Dunkirk, 9 cks
Antwerp, 2 J. T. Fletcher & Co.
Potassium Carbonate —
Stettin, 19 cks. Sachse & Klemm
Pyrites—
Huelva, 1,370 t. Matheson & Co.
Rosin—
Savannah, Ga., 4 340 brls.
Bayonne, 20 cks. 3,745
Saltpetre—
Hamburg, 1 brl. 60 kgs.
Sheep Dip—
B. Ayres, 15 dms. Pitt & Scott
Soap—
New York, qty.
Boston, 17 cs. J. Thompson
,, 8 Evans, Sons & Co.
Barcelona, 1
Soapstone—
Bordeaux, 400 bgs.
Philadelphia, 100
Soda—
Hamburg, 10 cks.
Sodium Nitrate—
Tocopilla, 16,775 bgs.
Starch—
Philadelphia, 150 bgs.
Newport News, 150
Boston, 30 brls. J. Armstrong & Co., Ld.
New York, 1,000
Boston, 110 brls.
Antwerp, 250 cs.
New York, 200 T. M. Duche & Sons
Antwerp, 225 J. T. Fletcher & Co.
Stearine—
Baltimore, 50 tcs.
Antwerp, 13 bxs J. T. Fletcher & Co.
,, 56 bgs.
Rotterdam, 7
Sulphur—
Cerro Azul, 460 bgs. Graham, Rowe & Co.
Sulphuric Acid—
Antwerp, 8 cs.
Talc—
Trieste, 20 bgs.
Tallow—
Boston, 1 hd.
B. Ayres, 1,102 hf.-pps.
Philadelphia, 150 tcs. 13 bxs.
Tartar—
Bordeaux, 21 cks.
Treacle—
Boston, 500 brls.
Turpentine—
Trieste, 2 brls. Evans, Sons & Co.
,, 2 cs. J. Woolley, Sons & Co.
Ultramarine—
Bremen, 4 cks.
Verdigris —
Bordeaux, 4 cks.
Waste Salt—
Hamburg, 143 cks. H. Tyrer & Co.
Wood Pulp—
Gothenburg, 82 pks. G. Schienkemsaldt
,, 30 bdls. G. F. Green & Co.
Boston, 325 rolls
Rotterdam, 129 bls.
Zinc Ashes—
Genoa, 18 pks.
Zinc Oxide—
New York, 150 brls.
Antwerp, 3 cks. J. T. Fletcher & Co.
,, 110 brls.

MANCHESTER.

Week ending November 21st.

Acetate of Lime —
New York, 855 bgs.
Albumen—
Paris, 11 cs
Aluminous Cake—
Rotterdam, 27 cks.
Antimony Oxalate—
Rotterdam, 4 crts.
Bone Ash —
Paysandu, 672 t. J. Gordon & Co.
Caustic Potash—
Antwerp, 20 dms.
Chemicals *(otherwise undescribed)*
Rouen, 24 cks.
Chromium Fluoride—
Rotterdam, 6 cs.
Colours—
Antwerp, 8 pks. J. T. Fletcher & Co.
,, 7
Rotterdam, 39 cks. 72 cs. 22 bxs. 97 brls.
Dyestuffs—
Alizarine
Rotterdam, 96 cks. 4 cs. 1 bx. 33 brls.
Indigo
Rotterdam, 5 cs.
Farina—
Stettin, 300 bgs. Brown, Gevecke, & Co.
,, 1,405
Hamburg, 105
Rotterdam, 1,750 H. W. Jackson
Gelatine—
Rouen, 20 cs.
Glucose—
New York, 251 brls.
Glue—
Rouen, 50 cks. 111 bls.
Antwerp, 3 brls.
Hamburg, 40 bgs.
Rotterdam, 40 20 cs.
Treport, 30
Limestone—
Antwerp, 1 crte. 3 cs.
Litharge—
Rotterdam, 24 cks.
Naphtha—
Copenhagen, 2 dms.
Ochre—
Treport, 62 cks.
Paranitraniline—
Rotterdam, 1 ck.
Pitch —
Hamburg, 48 bls.
Potash—
Treport, 34 cks.
Potassium Chloride —
Hamburg, 5 cks.
Potassium Oxalate—
Rotterdam, 5 cks.
Rosin—
Charleston, G., 2,400 brls.
Saltpetre—
Hamburg, 9 kgs.
Sodium Phosphate—
Antwerp, 6 cks.
Starch—
Rotterdam, 55 cs.
Ghent, 80
Antwerp, 50
Hamburg, 280
Tallow—
Rouen 139 bgs.
Tar Salts—
Hamburg, 2 cks.
Tar Waste—
Rotterdam, 8 cks.
Tartaric Acid—
Rotterdam, 2 cks.
Tin Oxide—
Rotterdam, 12 brls.
Waste Salt—
Hamburg, 1 ck. and a qty.
Wood Pulp—
Rotterdam, 127 bls.
Hamburg, 800 74 bdls.
Gothenburg, 1,415
Gefle, 164 Stott, Coker, & Co.
Skutska, 1,800 ,,
Zinc Ashes —
Stettin, 15 cks.
Zinc Oxide—
New York, 100 brls.

HULL.

Week ending November 21st.

Acids—
Bari, 40 cs. Wilson, Sons, & Co., Ld.
Albumen—
St. Petersburg, 20 cs.
Alum —
Rotterdam, 50 bgs. W. & C. L. Ringrose
Asbestos—
Antwerp, 2 cs. Wilson, Sons, & Co., Ld.
Barytes—
Amsterdam, 50 bgs. W. & C. L. Ringrose
Antwerp, 180 cks. H. F. Pudsey
Hamburg, 4
Camphor—
Hamburg, 1 ck. 1 brl. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
New York, 3 dms. Wilson, Sons, & Co., Ld.
,, 8 pks.
Bremen, 4 kgs. Veltmann & Co.
Hamburg, 137 bgs. Wilson, Sons, & Co., Ld.
Antwerp, 34 cks. 1 cs. Wilson, 68 pks. Sons, & Co., Ld.
Dunkirk, 42 ,,
Cod Oil—
Hamburg, 10 cks. Wilson, Sons, & Co., Ld.
Colours—
Hamburg, 13 cks. Wilson, Sons, & Co., Ld.
Antwerp, 2 Bailey & Leetham
,, 6 pks. Wilson, Sons, & Co., Ld.
Hamburg, 4 cks.
Rotterdam, 1 brl. Hutchinson & Son
,, 18 cks. W. & C. L. Ringrose
,, 19 cs.
Danzig, 11 cks. Wilson, Sons, & Co., Ld.
Dunkirk, 13 brls. ,,
Cottonseed Oil—
New York, 10 brls. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 17 cks. W. & C. L. 31 pks. Ringrose
Cutch
Hamburg, 2 cs. Wilson, Sons, & Co., Ld.
Indigo
Rotterdam, 1 cht. Hutchinson & Son
Shumac
Trieste, 20 bls. Wilson, Sons, & Co., Ld.
Palermo, 830 bgs.
,, 2,150
Farina—
Harlingen, 1,350 bgs. W. & C. L. Ringrose
Stettin, 140 Wilson, Sons, & Co., Ld.
,, 100
Hamburg, 100 ,,
Ghent, 20 ,,
Harlingen, 577 bls. Hutchinson & Son
Glucose —
Stettin, 35 cks. Wilson, 200 bgs. Sons, & Co., Ld.
New York, 1,000 5 brls. ,,
Glue—
Christiansund, 1 brl. Wilson, Sons, & Co., Ld.
Antwerp, 4 cks. Bailey & Leetham
Stettin, 4 Wilson, Sons. & Co., Ld.
Hamburg, 20 bgs. 25 bls. ,,
Dunkirk, 8 cks. ,,
Lime—
New York, 270 bgs. Wilson, Sons, & Co., Ld.
Litharge—
Rotterdam, 7 cks. W. & C. L. Ringrose
Magnesia—
Hamburg, 1 ck. Lofthouse & Saltmer
Manure—
Hamburg, 50 t. Wilson, Sons, & Co , Ld.
Mica—
Hamburg, 4 cs. Wilson, Sons, & Co., Ld.
,, 2
Naphthol —
Rotterdam, 5 cks. Hutchinson & Son
Paint —
New York, 5 cs. Wilson, Sons, & Co., Ld.
Phosphate—
Brunswick, G., 1,100 t.
Pitch—
St. Petersburg, 121 cks.
Antwerp, 4 H. F. Pudsey
Hamburg, 16 cs. Wilson, Sons, & Co., Ld.
,, 12 cks.
Potash—
Rotterdam, 22 cks. W. & C. L. Ringrose
Pumice Stone—
Messina, 140 pks.
Pyrites—
Huelva, 830 t.
Saltpetre—
Hamburg, 20 cks. Wilson, Sons, & Co., Ld.
Sodium —
Hamburg, 12 cks. Wilson, Sons, & Co., Ld.
Starch—
Antwerp, 40 cs. Bailey & Leetham
Amsterdam, 162 Hutchinson & Son
Bremen, 1,959 Veltmann & Co.
Ghent, 149 Hutchinson & Son
Dunkirk, 50 bgs. Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 26 bgs. Bailey & Leetham

Sulphur—
Catania, 872 pks. Wilson, Sons, & Co., Ld.
,, 1,075

Tallow—
New York, 100 tcs. Wilson, Sons, & Co., Ld.
Harlingen, 2 cks. Hutchinson & Son

Tar—
St. Petersburg, 5 cks. Wilson, Sons, & Co., Ld.

Tartar—
Bordeaux, 5 cks. Rawson & Robinson

Tartaric Acid—
Rotterdam, 2 cks. W. & C. L. Ringrose
,, 4 Hutchinson & Son

Treacle—
New York, 600 brls. Wilson, Sons, & Co., Ld.

Ultramarine—
Rotterdam, 24 cks. W. & C. L. Ringrose
,, 3 cs. Hutchinson & Son
Bremen, 20 cks.

Varnish—
Antwerp, 2 cs. Bailey & Leetham

White Lead—
Rotterdam, 11 cks. Hutchinson & Son
Antwerp, 34 Bailey & Leetham
Amsterdam, 27 Hutchinson & Son
Rotterdam, 16 W. & C. L. Ringrose

Wood Pulp—
Hamburg, 140 bls. Bailey & Leetham
,, 60 W. & C. L. Ringrose
New York, 1,200 bdls.
Abo, 40 J. Good & Sons
Bango, 811 ,,

GLASGOW.

Week ending November 26th.

Acetate of Lime—
Philadelphia, 193 bgs.

Aniline—
Rotterdam, 26 cks. 7 cs. J. Rankine & Son

Asbestos—
Genoa, 4 cs.

Barium Chlorate—
Rotterdam, 22 cks. J. Rankine & Son

Barium Sulphate—
Antwerp, 100 bgs.

Castor Oil—
Fiume, 12 cks.

Chemicals (*otherwise undescribed*)
Rotterdam, 2 cks. J. Rankine & Son
Hamburg 2 cs.

Citric Acid—
Messina, 8 cks.

Cod Oil—
St. John's, N'fld., 58 cks.

Colours—
Rotterdam, 52 pks. J. Rankine & Son

Dyestuffs—
Alizarine
Rotterdam, 76 cks. 30 pks. J. Rankine & Son
Logwood
Jamaica, 496 t. Mucklow & Co.
Shumac
Palermo, 100 bgs. 50 bls.

French Chalk—
Fiume, 100 bgs. P. M'Intosh & Co.
,, 40 Robertson, M'Intosh & Co.
,, 100

Gelatine—
Hamburg, 3 cs.

Glucose—
New York, 250 brls. Waddell & Bryson
,, 100

Hydrofluoric Acid—
Hamburg, 1 ck.

Iron Oxide—
Trieste, 26 cks. Ferguson & Reid

Ochre—
Rouen, 4 cks.

Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son

Paint—
Philadelphia, 3 brls.

Painters' Colours—
Antwerp, 2 cks. 5 cs.

Potash—
Rotterdam 93 cks. J. Rankine & Son
Rouen, 8

Potassium Nitrate—
Hamburg, 60 cks.

Pumice Stone—
Leghorn, 50 bgs.

Pyrites—
Huelva, 1,687 t. Tharsis Co.

Rosin—
Savannah, 6,000 brls.
,, 3,785 John Parker

Saltpetre—
Hamburg, 40 cks.

Soap—
Fiume, 34 cs. Buchanan Brs. & M'Intyre
,, 84
Rouen, 4

Starch—
Fiume, 100 bgs. Robertson, M'Intosh & Co.
Antwerp, 140 cs.
Ghent, 140
New York, 700

Sulphur Ore—
Huelva, 1,200 t. Seville Sulphur & Copper Co., Glasgow

Tar Waste—
Rotterdam, 3 cks. J. Rankine & Son

Tartar—
Bordeaux, 5 cks.
Messina, 5 ,,

Treacle—
Philadelphia, 850 brls.
New York, 453 Waddell & Bryson

Turpentine—
Savannah, 2,000 brls.

Varnish—
Antwerp, 3 cs. 1 ck.

Wase Salt—
Hamburg, 547 cks. 1,524 bgs.

White Lead—
Rotterdam, 65 cks. J. Rankine & Son

Wood Pulp—
Trieste, 82 bls. Brown & Polson
Fiume, 409 Robertson, M'Intosh & Co.
Oporto, 1,076
Kragero, 4,346 Clyde Paper Co., Ld.
Drontheim, 200
Christiania, 2,376 1 cs.

Zinc Oxide—
Antwerp, 25 cks.

TYNE.

Week ending November 21st.

Barium Chlorate—
Rotterdam, 330 bgs. Tyne S. S. Co.

Cod Oil—
Bergen, 9 brls.

Glucose—
New York, 50 brls. Furness, Withy, & Co.

Glue—
Hamburg, 90 bgs. Tyne S. S. Co.
Antwerp, 1 ck. ,,

Limestone—
Antwerp, 1 cs. Tyne S. S. Co

Mica—
Hamburg, 1 cs. Tyne S. S. Co.

Phosphate—
Antwerp, 370 t. Langdale's Chemical M. Co.
Dunkirk, 301

Salt—
Hamburg, 180 t. Blaydon Manure and Alkali Co.

Saltpetre—
Hamburg, 21 cks. Tyne S. S. Co.

Starch—
Antwerp, 136 cs. Tyne S. S. Co.

Tar—
Hamburg, 6 tins Tyne S. S. Co.

Varnish—
Antwerp, 5 kgs. Tyne S. S. Co.
New York, 10 brls. Furness, Withy, & Co

Wood Pulp—
Gothenburg, 891 bls.
Skien, 4,350 pks.

GOOLE.

Week ending November 18th.

Alizarine—
Rotterdam, 26 brls. 1 cs.

Alkali—
Calais, 2 cks.

Aniline—
Rotterdam, 256 cks. 109 cs.

Caoutchouc—
Boulogne, 9 cks. 1 cs.

Carbonate of Lime—
Antwerp, 133 bgs.

Colours—
Hamburg, 1 ck.

Dyestuffs (*otherwise undescribed*)
Boulogne, 65 cks. 8 cs. 38 pks.
Hamburg, 60

Glue—
Boulogne, 1 ck.
Rouen, 4

Logwood—
Belize, 440 t.

Potash—
Dunkirk, 62 dms.

Pyrites—
Huelva, 1,094 t.
Seville, 260

Saltpetre—
Hamburg, 3 cks.

Sodium Silicate—
Rotterdam, 2 cks.

Starch—
Rotterdam, 30 cs.
Ghent, 279 bxs.

Stearine—
Antwerp, 4 cks.

Waste Salt—
Hamburg, 13 cks. 250 t.

Wood Pulp—
Hamburg, 480 pks.

GRIMSBY.

Week ending November 21st.

Barytes—
Rotterdam, 116 bgs.

Caoutchouc—
Rotterdam, 5 cs.

Chemicals (*otherwise undescribed*)
Antwerp, 3 cks. 1 cs.
Hamburg, 4 4
Dieppe, 4

Colours—
Hamburg, 13 cks. 6 cs. 188 pks.
Antwerp, 8 21

Farina—
Hamburg, 200 bgs.

Glue—
Dieppe, 14 cks.

Pitch—
Dieppe, 10 cks.

Starch—
Rotterdam, 20 cs.

Wood Pulp—
Malmo, 400 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 25th.

Acetic Acid—
Algoa Bay, 27 cks. 17 c. 8 cs. £122

Alkali—
Lyttelton, 9 c. £15

Alum—
Pt. Elizabeth, 6 cks. £13

Ammonia—
Rotterdam, 50 dms. £77
Calcutta, 3 c. 10

Ammonium Carbonate—
Cape Town, 2 c. £4
Dunkirk, 1 t. 10 36

Ammonium Chloride—
Salonica, 14 cks. £70

Ammonium Sulphate—
Natal, 20 t. £155
Hamburg, 20 150

Bleaching Powder—
E. London, 1 t. £16

Boracic Acid—
Wellington, 14 c. £22
Melbourne, 8 cks. 74
Antwerp, 8 13

Borax—
Christchurch, 10 c. £12
Antwerp, 5 t. 50
Wellington, 12 13

Carbolic Acid—
Amsterdam, 10 t. £220
Bombay, 1 9 c. 16
Napier, 75 dms. 66
Rotterdam, 24 cks. 110
New York, 6 28

Carbon Bisulphide—
Hamburg, 35 dms. £120

Caustic Soda—
E. London, 17 c. £19
Pt. Elizabeth, 1 t. 7 31
Seychelles, 6 1 50
Natal, 17 90
Delagoa Bay, 1 17 20 dms. 45
Algoa Bay, 11 18 269
Sydney, 1 10 24

Chemicals (*otherwise undes.*)—
Yokohama, 20 cks. £136
Bombay, 26 cs. 3 pks. 77
Calcutta, 2 c. 4 104
Pelotas, 5 24
Para, 41 kgs. 23
Algoa Bay, 2 20
Demerara, 115 11
Hamburg, 4 t. 38 dms. 267
Seville, 19 5 c. 89
Sydney, 11 cks 42 crates 222
Melbourne, 3 4 pks. 96
Madras, 23 5
Adelaide, 1 33 3 kgs. 35
Natal, 4 18

Citric Acid—
Rotterdam, 1 ck. 1 t. 10 kgs. £165
Hamburg, 1 20 c. 2 104
Amsterdam, 3 2 32
Lisbon, 5 30
Kurrachee, 1 cs. 7
Algoa Bay, 2 44
Stettin, 4 25
Bombay, 1 3

Coal Products—
Alizarine
New York, 50 cks. £564
Aniline
Ghent, 18 dms. £900
Aniline Dyes
Calcutta, 1 cs. £60
Aniline Oil
Dunkirk, 6 dms. £300
Anthracene
Rotterdam, 65 cks. £300
Benzol
Amsterdam, 12 dms. 18 puns. £579
Sydney, 1 cs. 10
Rotterdam, 91 cks. 506
Creosote
New York, 500 cks. £240
Naphtha
Melbourne. 82 dms. 20 crts. £74
Naphthaline
E. London, 5 kgs. £6
Rotterdam, 200 bgs. 110
Constantinople, 10 brls. 21
Hamburg, 12 cks. 100
Antwerp, 1 10
Nitro-naphthaline
Bilbao, 1 ck. £11
Paraffin Wax
Amsterdam, 4 cs. £5
Pitch
Newport News, 1,600 bgs. £290
Baltimore, 1,060 195
Cette, 640 t. 960
Hochfeld, 145 292
Boston, 1,030 brls. 630
Delagoa Bay, 40 kgs. 9
Danzig, 250 380
Rotterdam, 100 237
Antwerp, 455 338
Pyridine
Rotterdam, 12 cks. £135
Tar
Hamburg, 100 brls. £50
Algoa Bay, 200 dms. 6
Coal Products *(otherwise undes.)*—
New York, 500 cks. £240
Mauritius, 20 dms. 10
Copper Sulphate—
Marseilles, 5 t. 11 c. £90
Cette, 200 cks. 876
Paris, 110 481
Cream of Tartar—
Algoa Bay, 2 c. £11
E. London, 1 cs. 5
Sydney, 1 t. 84
Townsville, 5 22
Disinfectants—
Bombay, 1,300 dms £300
Lyttelton 7 cs. 18
Hamburg, 25 cks. 12
Kobe, 2 t. 19
Algoa Bay, 19 pks. 48
Cape Town, 244 dms. 57 cs. 100 cks. 348
Bahia, 27 cks. 35
Karachi, 20 175 dms. 35
Magnesia—
Hamburg, 1 c. £10
Magnesium Borate—
Libau, 7 c. £12
Manure—
Teneriffe, 10 t. £70
Natal, 50 10 c. 310
Landerneau, 110 420
Berbice, 20 165
Jersey, 68 1 215
Cape Town, 475 2,585
Penang, 321 2,568
Mirbane Oil—
Rotterdam, 10 dms. £20
Muriatic Acid—
Singapore, 4 t. 2 c. £19
Oxygen—
Amsterdam, 12 c. £71
Melbourne, 1 cs. 25
Phosphorus—
Demerara, 4 c. £40
Potash—
Wellington, 1 t. 5 c. £52
Potash Salts—
Madras, 6 t. 4 c. £330
Potassium Bichromate—
Bombay, 20 kgs. £47
Potassium Chlorate—
Bombay, 2 cs. £10
Potassium Cyanide—
New York, 40 cs. £298
Pt. Elzabeth, 4 t. 10 c. 535
Tuticorin, 4 20
Bombay, 2 cks. 8
Sydney, 10 55
Potassium Prussiate—
Hamburg, 20 cks. £310
Konigsberg, 1 15

Saltpetre—
Wellington, 15 c. £16
Bombay, 5 7
Corinto, 1 t. 10 33
Oporto, 1 2 23
Dunedin, 10 11
Amsterdam, 10 15
Pt. Elizabeth, 7 7
Valencia, 2 3 46
Madeira, 12 16
Carril, 1 1 26
Melbourne, 4 7 75
Sheep Dip—
Natal, 24 t. 14 c. £375
Calcutta, 50 pks. 18
B. Ayres, 73 2 1,636
Cape Town, 160 dms. 55
Algoa Bay, 30 6 788
Lyttelton, 300 cs. 750
E. London, 5 12 100
Silver Nitrate—
Bombay, 2 cs. £45
Soda—
Pt. Elizabeth, 9 t. 3 c. £23
Cape Town, 4 3 10
Soda Alkali—
Rotterdam, 5 t. 8 c. £32
Soda Crystals—
Fremantle, 14 t. 19 c. £36
Sodium Prussiate—
Danzig, 5 t. £240
Sodium Sulphate—
Lyttelton, 1 t. 18 c. £6
Sodium Tartrate—
New York, 5 c. £17
Sulphur—
E. London, 18 c. £10
Antwerp, 6 t. 36
Cape Town 6 14 68
Pt. Elizabeth, 7 9 65
Sulphuric Acid—
Colombo, 3 t. 18 c. £13
Algoa Bay, 3 22
Natal, 1 18 19
Superphosphate of Lime—
St. Michael's, 5 t. 12 c. £20
Tartaric Acid—
Malta, 2 c. £14
Cape Town, 1 7
Sydney, 10 58
Adelaide, 10 59
Bombay, 6 34
Algoa Bay, 7 33
Melbourne, 2 t. 10 313

LIVERPOOL.

Week ending November 25th.

Alum—
Rotterdam, 19 c. 1 q. £3
New York, 1 t. 1 5
Melbourne, 3 5 18
Penang, 3 11 2 15
Ammonium Sulphate—
Yokohama, 18 c. £5
Aluminous Cake—
Calcutta, 14 t. 19 c. 3 q. £66
Melbourne, 6 2 19
Ammonia (Liquid)—
Antofagasta, 2 c. 2 q. £7
Vera Cruz, 16 28
Ammonium Carbonate—
Libau, 2 t. £56
Valparaiso, 2 13 c. 92
Stettin, 1 27
Copenhagen, 2 2 59
Danzig, 10 2 q. 15
Bremen, 16 23
Adelaide, 5 7
Ammonium Chloride—
Varna, 11 c. £19
Galatz, 1 t. 35
Bombay, 1 16 80
Yokohama, 1 20
Hiogo, 1 20
Alexandria, 2 70
Ammonium Sulphate—
Valencia, 60 t. 9 c. 1 q £533
Leghorn, 58 522
Boston, 101 10 771
New York, 76 5 597
Nantes, 20 150
Gd. Canary, 10 83
Newport News, 15 7 125
San Francisco, 50 18 3 420
Bleaching Powder—
Baltimore, 65 cks.
Bombay, 10
Boston, 502 11 pks.
B. Ayres, 7 brls.
Cape Town, 40 bxs.
Corfu, 25
Dunkirk, 18
Ghent, 75
Naples, 50 kgs.
Nantes, 30
Newport News, 491
New York, 141 45
Philadelphia, 244
Portland, M., 114
Rio de Janeiro, 6 cs.
San Sebastian, 29
Seville, 5
Vera Cruz, 20
Boracic Acid—
Montreal, 2 t. 5 c. 3 q. £70
Adelaide, 5 10
Melbourne, 2 4 2 84
Borax—
Montreal, 11 t. 6 c. 3 q. £227
Hamburg, 7 19 1 160
Vera Cruz, 4 2 5
Rotterdam, 14 11 3 292
Constantinople, 3 60
Passages, 3 9 2 70
Ancona, 15 1 15
Stettin, 3 60
Hiogo, 6 17 2 124
Barcelona, 5 3 2 104
Genoa, 2 9 49
Antwerp, 5 18 119
Melbourne, 1 2 20
Adelaide, 1 2 20
Valparaiso, 16 16
Calcium Chloride—
B. Ayres, 4 t. 13 c. £11
Carbolic Acid—
Montreal, 1 t. £60
Riga, 2 10 c. 169
Paris, 14 42
Hamburg, 3 13
St. Thomas, 18 16
Hiogo, 2 10 152
Odessa, 1 7 2 q. 44
Genoa, 1 5 81
Calcutta, 10 dms. 5 48
Caustic Potash—
New York, 2 t. 10 c. £80
Caustic Soda—
Adelaide, 15 dms.
Amsterdam, 30
Arecibo, 20
Bahia, 55
Baltimore, 52
Barcelona, 60 60 cks.
Boston, 230 50 brls.
Brisbane, 39 30 bgs.
Bremen, 5
B. Ayres, 20
Calcutta, 20
Cartagena (Sp.), 40 15 cks.
" S. A., 15
Catania, 35
Fiume, 156
Galatz, 112
Gefle, 58 brls.
Havana, 110
Hiogo, 100
Jaffa, 70
Libau, 451
Malta, 4
Manila, 500
Naples, 20
Newport News, 50
N. Orleans, 150
New York, 1,214 200
Oporto, 13
Para, 5
Paysandu, 100
Philadelphia, 180 30
Pisco, 30
Pt. Elizabeth, 10
Portland, M., 85 10
Rio de Janeiro, 85
Rotterdam, 109
Salaverry, 6
Santander, 27
Seville, 70 20
Singapore, 30
Sydney, 44
Tampico, 84
Tarragona, 50
Valencia, 30
Valparaiso, 10
Vigo, 15
Chemicals *(otherwise undescribed)*
Hamburg, 1 t. 8 c. £41
Galatz, 1 15 65
Melbourne, 7 10 100
Odessa, 8 10 238
Boston, 25 19 665
New York, 13 12 554
Philadelphia, 13 11 345
Naples, 1 35
Genoa, 1 10 54
Smyrna, 1 35
Rotterdam, 18 29
China Clay—
Baltimore, 295 t.
Barcelona, 70 cks.
Boston, 1,747
Calcutta, 720
Philadelphia, 100
Portland, M., 169
Coal Products—
Aniline Colours
New York, 55 cks. 5 kgs.
Aniline Dyes
Barcelona, 1 cs.
Aniline Oil
Boston, 10 dms.
Portland, 6
St. Nazaire, 5
Aniline Salts
Boston, 29 cs.
New York, 15 cks.
Piræus, 10
St. Nazaire, 20
Naphtha
Calcutta, 48 dms.
Sydney, 20
Melbourne, 20
Pitch
Antwerp, 299 brls.
Tar
Callao, 15 brls.
Galatz, 10
Ibrail, 70
St. John's, N'fld., 20
Coal Products *(otherwise undes.)*—
Boston, 20 cs. 3 kgs.
Copper Sulphate—
Rouen, 10 t. £151
Ibrail, 2 19 c. 2 q. 41
Amsterdam, 3 1 50
Konigsberg, 2 18 1 46
Kentville, 10 8
Palermo, 4 19 2 83
Algiers, 4 18 78
Smyrna, 1 16
Havre, 8 130
Fremantle, 10 168
Marseilles, 55 18 2 935
Bordeaux, 139 19 1 2,246
Riga, 10 1 3 165
Hamburg, 19 3 1
Genoa, 14 14 3 237
Lyttelton, 2 32
Vera Cruz, 7 7
Cream of Tartar—
Coronel, 1 c. £5
Gd. Canary, 2 9
Disinfectants—
Calcutta, 6 cks. 8 t. 15 c. 3 q. £229
Pt. Said, 10 dms. 15
Dried Blood—
Gd. Canary, 2 t. £11
Port Royal, 176 14 c. 1,491
Marseilles, 30 7 3 q. 177
Hydrochloric Acid—
San Juan, 1 t. 2 c. £16
Iron Oxide—
Santos, 1 t. £15
Lime—
C. C. Castle, 4 t. 10 c. £7
Accra, 9 10 16
Magnesium Carbonate—
St. Nazaire, 3 c. 2 q. £13
Magnesium Sulphate—
Portland, Or., 25 brls.
Manure—
Bordeaux, 20 t. £110
Las Palmas, 5 38
Adelaide, 100 375
Ochre—
Valparaiso, 6 brls.
Oxalic Acid—
Rio, 1 c. £6
Copenhagen, 6 1 q. 8
Boston, 10 t. 8 372
Paint—
Barranquilla, 3 kgs. 6 cs.
B. Ayres, 17 cks.
Calcutta, 20 dms. 26
Constantinople, 1
Coquimbo, 2 5
Degama, 9 524
E. London, 399
Gd. Bassam, 60
Guayaquil, 9
Havre, 2
Iquique, 56
Iquitos, 2
Lisbon, 75 dms. 5
Mollendo, 9

M. Video, 72 41
New York, 4 25
Pernambuco, 30 dms.
Portland, 5
Pt. Natal, 9
Pt. Said, 2 brls.
Rufisque, 20
St. John's, N'fld., 4 160
San Juan, 1 45
Santander, 16
Savanilla, 150
Sierra Leone, 11
Tampico, 13 cs.
Trieste, 25
Valparaiso, 2 240

Painters' Colours—
Accra, 2 cks.
Alexandria 3 cs. 27 pks. 9 dms. 335 kgs.
Bahia, 46 kgs.
Baltimore, 72
B. Ayres, 31 65 83 34
New York, 2 16 2 cs.
Para, 8 brls. 1 15 4 tcs.
Pelotas, 53
Piræus, 10
Rio de Janeiro, 13 brls.
Rotterdam, 25 1 cs.
Santos, 2 brls.
Tangiers, 1 1
Tripoli, 20
Valparaiso, 6

Paraffin Wax—
Mytelene, 16 bgs.
Odessa, 15
Salonica, 15 cs.
Bari, 60
Constantinople, 51

Phosphorus—
Shanghai, 1 t. £200
Hiogo, 2 16 c. 688
Yokohama, 3 840

Picric Acid –
New York, 1 t. £93

Potashes—
B. Ayres, 1 t. £22

Potassium Carbonate—
New York, 18 t. 6 c. £327
B Ayres, 19 25

Potassium Chlorate—
Hamburg, 6 t. £238
Kelangford, 2 10 c. 100
Philadelphia, 3 13 144
Odessa, 3 7 120
Santos, 1 10 60
Stettin, 7 276
Smyrna, 3 4 114
New York, 7 278
Libau, 10 20
Gothenburg, 5 10 227
Ancona, 1 37
Hiogo, 2 10 96

Potassium Cyanide—
Curacao, 12 c. £68

Potassium Permanganate—
Portland, Me., 2 c. £8

Potassium Prussiate—
Genoa, 4 t. £238

Salt—
Abonnema, 20 t.
Accra, 6 5 c.
Adelaide, 30
Akassa, 385 18
Amsterdam 140
Antwerp, 372
Axim, 5
Baltimore, 1,868
Barbadoes, 50
Benty, 125
Boston, 260
B. Ayres, 17 17
Calcutta, 2 3
Conakry, 250
Dakar, 20
Dixcove, 25
E. London, 17 16
Ghent, 1,726
Groningen, 167
Lagos, 118 15
Manoh, 15
Manaos, 17 12
Melbourne, 50
Monrovia, 12 10
Newcastle, 955
N. Orleans, 1,250
New York, 190
Opobo, 25
Old Calabar, 20
Para, 31 5
Philadelphia, 440
Portland, Me., 50
Pt. Natal, 50
Porto Novo, 25
Rotterdam, 510
St. John, N.B., 200
Salt Pond, 12 10
San Francisco, 5 cks.
Sherbro, 300 t.
Sierra Leone, 170
Sulymah, 25
Sydney, 90
Tocopilla, 5
Trinidad, 64 15
Valparaiso, 523 18
Wilmington, 390
Winnebah, 13 10

Salt Cake—
Gijon, 28 t. 1 c. £58

Saltpetre—
Para, 15 c. £13
Pernambuco, 3 t. 77
Valparaiso, 9 8 2 q. 201
Gijon, 10 11
La Paz, 4 2 6

Sheep Dip—
M. Video, 200 drs. £250
Rosario, 6 t. 10 c. 124
B. Ayres, 9 11 } 268
100 dms. 15 cks.

Soap—
Accra, 1 cs.
Addah, 20 bxs.
Adjuah, 122
Algoa Bay, 60 23 pks.
Antwerp, 15
Appam, 70
Assinee, 100
Bakana, 1
Barbadoes, 1,251
Batburst, 230
Bombay, 21
B. Ayres, 2
Bugama, 250
Calcutta, 100 625 bdls. 44
Callao, 4
C. C. Castle, 168
Cape Town, 25 100
Constantinople, 40
Curacao, 231
E. London, 841
Funchal, 16
Genoa, 60
Gibraltar, 390
Gd. Bassam, 100
Gothenburg, 225
Gd. Canary, 465
Grenada 100
Half Jack, 20
Hamburg, 50 250 219
Havre, 259
Hong Kong, 580
Iquitos, 50
Lagos, 312
Las Palmas, 785
Madras, 10
Manaos, 350
New York, 885 29
Old Calabar, 1,400
Opobo, 1,200
Palma, 450
Para, 1
Penang, 5
Philadelphia, 50 5 cks.
Point-a-Pitre, 300
Pt. Elizabeth, 10
Pt. Natal, 292
Pram Pram, 50
Quittah, 50
Rangoon, 500
Rio de Janeiro, 7
Rotterdam, 400
St. John's, N'fd., 545 2
St Lucia, 96
Salt Pond, 224 1
San Juan, 100
Shanghai, 2,666
Sierra Leone, 110
Singapore, 245
Smyrna, 125
Trinidad, 1,500
Teneriffe, 50
Valparaiso, 300 120 kgs.
Yokohama, 4

Soda Alkali –
Barcelona, 35 brls.
Bari, 17
Leghorn, 55
Sydney, 137

Soda Ash—
Antwerp, 14 bgs.
Baltimore, 17 cks. 1,264
Barcelona, 20
Bombay, 8
Boston, 119 tcs. 120
Bremen, 25
B. Ayres, 50
Cadiz, 150
Candia, 300
Copenhagen, 90
Hamburg, 20 100 brls. 500
Havana, 2
Hiogo, 100
Malaga, 20
New York, 3,780
Oporto, 2
Para, 15 kgs.
Philadelphia, 400
Riga, 21 cks.
Rio de Janeiro, 10 50
Rotterdam, 200
Sydney, 61
Syra, 75
Vera Cruz, 80

Soda Crystals—
Boston, 250 bgs.
B. Ayres. 67 cks. 25 kgs.
New York, 280 280 brls.
Philadelphia, 167
Pt. Natal, 50
San Francisco, 700

Sodium Arseniate—
Boston, 5 cks.
Rio de Janeiro, 7 brls.

Sodium Bicarbonate—
Antwerp, 20 kgs. 1 ck.
Bari, 4
Beyrout, 25
Odessa, 200
Palermo, 30
Paris, 60
Pt. Natal, 30
Riga, 110
Rotterdam, 30
St. John, N.B., 50
San Francisco, 200 1 cs.
Algoa Bay, 25
Bombay, 20
Bremen, 17 2
Cape Town, 10 bgs.
Christchurch, 50
Genoa, 35
Gijon, 10 20 brls.
Hamburg, 40 22 40
Hong Kong, 10
Singapore, 6 16
Stettin, 9
Sydney, 20
Alexandria, 170
Libau, 100
Melbourne, 250
M. Video, 45
Nantes, 10
New York, 2
Yokohama, 1,000

Sodium Carbonate—
Antwerp, 56 brls.
Boston, 56
Rotterdam, 50

Sodium Chlorate—
Hamburg, 7 brls.
Rouen, 40 kgs.
Vera Cruz, 2 cks.

Sodium Prussiate—
Naples, 8 cks.

Sodium Silicate—
Acajutla, 7 dms.
New York, 10 cks.
Oporto, 20
Pt. Elizabeth, 10
San Sebastian, 32
Tampico, 18
Valencia, 500 bgs.

Sodium Sulphate—
Rio de Janeiro, 7 brls.
Rotterdam, 4 cks.
Boston, 21

Starch—
Alexandria, 20 cs.
Rio de Janeiro, 47 cks. 9 brls.

Strontia—
Hamburg, 100 t. 4 c. £800

Sulphur—
Callao, 2 t. 3 c. 1 q. £16
Boston, 200 17 846
M. Video, 11 1 11

Superphosphate of Lime—
Bordeaux, 40 t. 1 c. 3 q. £87

Superphosphates—
Gd. Canary, 10 t. £34
Valencia, 50 92

Tartaric Acid—
Santander, 2 c. £14

Turpentine—
Cartagena, 10 c. 2 q. £12
Lisbon, 12 3 18

Yarnish—
Bahia, 1 cs.
B. Ayres 2
Cartagena, 40 dms.
Hamburg, 2
Havana, 1
Leghorn, 19 pks.
Old Calabar, 10
Pt. Elizabeth, 8
Portland, 1
Rio de Janeiro, 7
Valparaiso, 18

White Lead—
Bahia, 70 kgs.
St. Thomas, 6 cks.
New York, 17

Zinc Oxide—
Pt. Said, 11 c. 3 q. £

MANCHESTER

Week ending November 25th.

Alum—
Limassol, qty.

Ammonium Carbonate—
Antwerp, 7 cks.
Rotterdam, 7
Treport, 32
Copenhagen, 1 cs. 10 kgs.

Aniline Colours—
Rotterdam, 1 brl. 2 kgs.
Rouen, 1
Hamburg, 1 cs. 1

Aniline Oil—
Rotterdam, 10 dms.
Antwerp, 12 pks.
Hamburg, 5

Aniline Salt—
Treport, 10 cks.

Caustic Soda—
Hamburg, 2 cks.

Cottonseed Oil—
Tunis, 50 brls.

Creosote Salts—
Rotterdam, 16 cks.

Glue—
Antwerp, 20 cks.

Manure—
Rouen, 1 bx.

Paraffin Wax—
Larnaca, 2 cs.

Pitch—
Antwerp, 1,116 c.

Salt—
Rotterdam, 200 t.
Galveston, 20,198 sks.

Soap—
Bombay, 15 cks.

Sodium Arseniate—
Antwerp, 4 cks.

Sodium Bicarbonate—
Treport, 34 kgs.

Sulphur—
Tripoli, 1 kg.

Tallow—
Rotterdam, 1 ck.

Tar Oil—
Antwerp, 3 dms.

Tar Salts—
Antwerp, 14 cks.
Copenhagen, 11 216 kgs.

Toluol—
Rotterdam, 30 cks.

HULL.

Week ending November 21st.

Ammonium Sulphate—
Antwerp, 100 bgs.
Ghent, 1,000
Rotterdam, 300
Stettin, 500
Venice, 801

Barytes—
Stettin, 125 t.

Benzol—
Amsterdam, 24 cks
Rotterdam, 5 dms.

Bleaching Powder—
Fiume, 21 cks.
Helsingfors, 82
Stettin, 99

Caustic Soda—
Antwerp, 8 dms.
Trieste, 50

Chemicals (*otherwise unenumerated*)
Amsterdam, 28 cks. 30 pks.
Antwerp, 2 cs. 18
Christiania, 5 36 slbs.
Drontheim, 2 17 kgs.
Fiume, 1
Gothenburg, 36
Helsingfors, 1

rg, 20 6 14 pks.
1 25
6
dam, 8 72
55 203
6 8
olm, 8 19

seed Oil—
dam, 1,397 c.
rp, 469
17
190
ania, 18
k, 20
rg, 669
dam, 838
135
504

ffs (*otherwise undes.*)—
rg, 2 cks.
4 cs.
dam, 5

d Oil—
dam, 400 c.
rp, 100
nd, 7
104
ansand, 106
ansund, 25
eim, 97
rg, 210
146

e—
2,872 bgs.

l White—
50 bgs.

rs' Colours—
dam, 28 cks. 30 pks.
rp, 7 1 dm. 40
40
9
ania, 12 1 cs. 100
rk, 31
burg, 1
22 1
rg, 41
gen, 5
ork, 40 165
4 1
dam, 33 1
19 8
lm, 1
ersburg, 1
73

rp, 217 t.
rk, 178

eim, 40 cs.
burg, 1

ania, 6 cks.
dam, 30

dam, 12 cks.
rp, 6
rk, 47
rg, 11
1

e—
40 cks.
ania, 25
rg, 24

h—
rp, 4 cks.
rk, 1 cs
burg, 1
2
urg, 15
gen, 1
8

GLASGOW.

ending November 26th.

Acid—
Janeiro, £25

nium Carbonate—
din, 10 c.

nium Sulphate—
urg, 50 t. 12 c.
cia, 145 6¾
e, 10 3
a, 51 7½

irous Ammonia—
din, £25
gton, 25

ne—
e, £50

ome—
din, £37

Bleaching Powder—
Calcutta, 2 t. 3¾ c.
U.S.A., 7 1½
Dunedin, 6 4½

Borax—
Danzig, 15½ c.

Carbolic Acid—
Hong Kong, £24
Germany, 5 t. 14 c.

Castor Oil—
Adelaide, £22

Caustic Soda—
Paris, 10 t. 3¼ c.
Dunedin, 12 2

China Clay—
Bahia, 8 t. 10¾ c.

Coal Products—
Creosote Oil
Russia, £200
U.S.A., 75
Danzig, 10 t. 10 c.
Naphtha
Rouen, £50
Dunedin, 27
Pitch
Bombay, £30
Penang, 20
U.S.A., 52
Hamburg, 33 t. 6 c.
Venice, 1,677
Danzig, 181 12
Tar
Bombay, £45
Penang, 20
Delagoa Bay, 26
Russia, £22. 10s.
Danzig, 436 brls.
Tar and Pitch
Madras, £28
Singapore, 63

Coal Products (*otherwise undes.*)—
Hamburg, £90
Rotterdam, 448

Cod Oil—
Pt. Lyttelton, £60
Brisbane, 45

Copper Sulphate—
Paris, 5 t. 12¾ c.

Cottonseed Oil—
Auckland, 1 t. 15¾ c.

Cresylic Acid—
U.S.A., £50

Dextrine—
U.S.A., £33

Dyestuffs (*otherwise undescribed*)
U.S.A., £26

Extracts—
Barcelona, £203
Canada, 267
N. Zealand, 156
Toronto, 56
U.S.A., 114
Victoria, 164

Gelatine—
Algoa Bay, £26

Iodine—
Rotterdam, £260

Iron Sulphate—
Bombay, £55

Lamp Black—
Dunedin, £16

Linseed Oil—
Singapore, 1 t. 2¾ c.
Paarl, 1 2
St. John's, 2 11¼
Adelaide, 3 15
Dunedin, 2 18¾
Rockhampton, 16
Wellington, 20 16½
Cape Town, 8 10

Litharge—
Montreal, £27

Logwood—
Dunedin, £114
Lyttelton, 90

Magnesium Sulphate—
Freemantle, £39

Manganese—
Basle, £95

Paint—
Hong Kong, qty.
Penang, ,,
St. John's, £37
Adelaide, £23. 16s.
Brisbane, 94
Cape Town, 21 18
U.S.A., 81

Painters' Colours—
Nassau, £50
Perth, 17
Singapore, £43. 10s.
Cape Town, qty.
Adelaide, £27
Algoa Bay, 50
Auckland, ,,
Brisbane, 385
Canterbury, 154
Dunedin, ,,
Melbourne, 317
Napier, 26
Rockhampton, 92

Paraffin Wax—
Fiume, £30
King William's Town, 72
Rouen, £23. 10s.
Trieste, £300
Barcelona, 163
Italy, 604
Russia, 995
Spain, 77
Danzig, 56 t. 5 c.

Potash Salts—
Delagoa Bay, 18 t. 13¾ c.

Potassium Bichromate—
Hiogo, £352
Yokohama, 95
Rotterdam, 413
Lyons, 194
Madras, 54
Paris, 160
Rouen, 436
Canada, 82
N. Zealand, £20. 19s.

Potassium Prussiate—
Lyons, £297

Salt Cake—
Terneuzen, 300 t. 15¾ c.

Shumac—
Bombay, £70

Soap—
Hong Kong, 2 t. 9¼ c.
Penang, 2 14
Puerto Cortes, 2 16
St Lucia, 1 15½

Sodium Bichromate—
U.S.A., 11 t. 1½ c.
Lyons, 19
Paris, 19
Rouen, 1 6¼
Canada, 3 7¼
Italy, 3 9½

Sulphuric Acid—
Madras, £150

Tallow—
Rotterdam, 9 t. 13 c.
Natal, 19¼

Tartar—
Dunedin, £42

Treacle—
Amsterdam, 2 t. 13 c.
Christiania, 20 12
Rotterdam, 18
E. London, 1 4½

Varnish—
Hong Kong, £42

White Lead—
Johannesburg, £32
Cape Town, 27
Auckland, 144
Dunedin, 142
Transvaal, 88

TYNE.

Week ending November 21st.

Alkali—
Amsterdam, 53 t. 15 c.

Ammonium Sulphate—
Hamburg, 101 t. 1 c.

Antimony—
Rouen, 3 t.
Rotterdam, 7 10 c.

Barium—
Rouen, 30 t. 7 c.

Barium Carbonate—
Copenhagen, 3 t.

Bleaching Powder—
Bergen, 10 t. 1 c.
Antwerp, 20 5
Hamburg, 10 4
Amsterdam, 72 9
Rotterdam, 27 3
Copenhagen, 5 1
Christiania, 49 16

Carbolic Acid—
Odense, 14 c.

Caustic Soda—
Antwerp, 7 t. 12 c.
Hamburg, 4 18
Rotterdam, 20 14
Odense, 1 3
Copenhagen, 2 18

Magnesia—
Antwerp, 1 c.
Hamburg, 3
Copenhagen, 2

Paint—
Hamburg, 1 t. 7 c.

Potassium Bichromate—
Copenhagen, 8 c.

Rosin Oil—
Hamburg, 18 c.

Saltpetre—
Aalborg, 2 t.

Soda—
Bergen, 5 t. 3 c.
Hamburg, 21 11
Amsterdam, 20 8
Rotterdam, 20
Genoa, 5
Christiania, 5 3

Soda Ash—
Christiania, 5 t. 7 c.

Sodium Sulphate—
Antwerp, 50 t. 2 c.

Sulphur—
Christiania, 200 t.

Superphosphates—
Genoa, 100 t. 1 c.

Zinc Ashes—
Rotterdam, 3 t. 13 c.

GOOLE.

Week ending November 18th.

Alkali—
Rotterdam, 1 ck.

Benzol—
Boulogne, 24 cks.
Rotterdam, 170

Chemicals (*otherwise undescribed*)
Amsterdam, 4 cks.
Harlingen, 36

Coal Products (*otherwise undes.*)—
Antwerp, 150 cks. 1 dm.
Boulogne, 52 4 cs. 6
Ghent, 29 1
Hamburg, 1 1
Rotterdam, 64 1

Colours—
Boulogne, 1 ck. 2 cs.
Ghent, 1
Harlingen, 1
Rotterdam, 3

Dyestuffs (*otherwise undescribed*)
Dunkirk, 10 cks. 24 cs. 577 bgs.
Hamburg, 40 85
Rotterdam, 46 100

Manure—
Bruges, 129 bgs.
Dunkirk, 188
Ostend, 398
Hamburg, 236

Pitch—
Antwerp, 548 t.

GRIMSBY.

Week ending November 21st.

Alkali—
Hamburg, 20 cs.
Port au Prince, 113 dms.

Chemicals (*otherwise undescribed*)
Hamburg, 32 dms

Coal Products (*otherwise undes.*)—
Hamburg, 26 pks.

Colours—
Antwerp, 15 cks.
Hamburg, 5
Rotterdam, 2
Malmo, 2

Naphtha—
Dieppe, 59 cks.

Pitch—
Antwerp, 60 t.

Tallow—
Malmo, 60 cks.

PRICES CURRENT. WEDNESDAY, DECEMBER 2ND

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may

	£	s.	d.
Acids:—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5/10½	&	8 9
,, Glacial .. .. ,,			o/-
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅜
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	24	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	12	6
Aluminoferric .. .. ,,	2	7	6
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880=28° B .. .. per lb.	0	0	2¾
,, =24° B .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	20	5	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- & 35/-		
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4¼
,, Sulphate (grey) London .. .. .. per ton	7	13	9
,, ,, (grey) Hull .. .. ,,	7	10	0
Aniline Oil (pure) .. .. per lb.	0	0	10½
Aniline Salt ,, ... ,,	0	0	10
Antimony .. .. per ton	29	15	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6	to	65/-
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	1	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/-	to	30/-
Coal Tar Products and Dyes:—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	3	9
,, 50/90 ,, ... ,,	0	2	10½
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	2	1
Creosote (ordinary) .. .. ,,	0	0	2
,, (filtered for Lucigen light) .. .. ,,	0	0	2½
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	8
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	48	10	0
,, Sulphate .. .. ,,	17	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	42	0	0
,, (distilled S.G. 1250°) .. .. ,,	75	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	13	0	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	22	10	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	10	0
,, *Nitrate* .. .. ,,	18	10	0

	£	s.	d.
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4		
,, ,, (grey) (ex ship .. .. ,,	8		
Magnesium (ribbon and wire) .. .. per oz.	0		
,, Chloride (ex ship) .. .. per ton	2		
,, Carbonate .. .. per cwt.	1		
,, Calcined Magne .. .. per ton.	8		
,, Sulphate (Epsom Salts) .. .. .. per ton	2		
Manganese, Sulphate .. .. ,,	16		
Borate .. .. per cwt.	2		
,, Ore, 70 % .. .. per ton	3		
Methylated Spirit, 61° O.P. .. .. per gallon	0		
Naphtha (Wood), Solvent .. .. ,,	0		
,, ,, Miscible, 60° O.P .. .. .. ,,	0		
Oils:—			
Cotton-seed .. .. per ton	16		
Linseed .. .. ,,	17		
Petroleum, American .. .. per gallon	0		
Stearine .. .. per ton	20		
Phosphorus (yellow) .. .. per lb.	0		
,, (red) .. .. ,,	0		
Potassium (metal) .. .. per oz.	0		
,, Bichromate .. .. nett per lb.	0		
,, Carbonate, 90% (ex ship) .. .. .. per ton	17		
,, Chlorate .. .. per lb.	0		
,, Cyanide, 98% .. .. ,,	0		
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24		
,, ,, (Caustic Potash) 75/80 % .. ,,	21		
,, ,, (Caustic Potash) 70/75 % .. ,,	20		
,, Nitrate (refined) .. .. per cwt.	1		
,, Permanganate .. .. per cwt.	3		
,, Prussiate Yellow .. .. per lb.	0		
,, Sulphate, 90 % (ex ship .. .. .. per ton	9		
,, Muriate, 80 % (do.) .. .. .. ,,	8		
Silver (metal) .. .. per oz.	0		
Sodium (metal) .. .. per lb.	0		
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4		
,, ,, (Caustic Soda-ash) 48 % . ,,	4		
,, ,, (Carb. Soda-ash) 48% .. .. ,,	4		
,, ,, (Alkali) 58 % .. .. .. ,,	3		
,, ,, (Soda Crystals) .. .. .. ,,	2		
,, Acetate (ex-ship) .. .. ,,	14		
,, Arseniate, 45 % .. .. ,,	14		
,, Chlorate .. .. per lb.	0		
,, Borate (Borax) .. .. net, per ton.	19		
,, Bichromate .. .. ,, per lb.	0		
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9		
,, ,, (74 % Caustic Soda) ,, ,, ,,	8		
,, ,, (70 % Caustic Soda) ,, ,, ,,	7		
,, ,, (60 % Caustic Soda) .. ,, ,,	6		
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3		
,, ,, 77/78 % powdered (99 % hydrate) ,,	13		
,, Bicarbonate .. .. ,,	6		
,, Hyposulphite .. .. ,,	5		
,, Manganate, 25% .. .. ,,	15		
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0		
,, Nitrite, 98 % .. .. per ton	30		
,, Phosphate .. .. ,,	12		
,, Silicate (glass) .. .. per ton	4		
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3		
,, Stannate, 40 % .. .. per cwt.	3		
,, Sulphate (Salt-cake) .. .. per ton.	1		
,, ,, (Glauber's Salts) .. .. ,,	1		
,, Sulphide .. .. ,,	6		
,, Sulphite .. .. ,,	5		
Strontium Hydrate, 100% .. .. ,,	5		
Sulphocyanide Ammonium, 95 % .. .. per lb.	0		
,, Barium, 95 % .. .. ,,	0		
,, Potassium .. .. ,,	0		
Sulphur (Flowers) .. .. per ton.	7		
(Roll Brimstone) .. .. ,,	6		
,, Brimstone: Best Quality .. .. ,,	4		
Superphosphate of Lime (20% .. .. ,,	2		
Tallow .. .. ,,	18		
Tin Crystals .. .. per lb.	0		
,, English Ingots .. .. per ton	63		
Zinc Spelter) .. .. ,,	17		
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5		

THE

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LATE ADVERTISEMENT.

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WHAT IS THE REASON WHY?

IN the report of the last meeting of the Manchester Section of the Society of Chemical Industry, which appears elsewhere in this issue, there is something to be read which appeals to chemists as a body—as fellows of a body which has for its chief aim the maintenance of the dignity of the profession—in addition to the interest it bears for those industrially connected with the oil trade.

In the course of the admirable paper to which the members of the Society were treated, there were facts divulged which could not fail to prompt certain questions to those who followed it with any care. It is a few of these questions we are about to put into words.

The statements about the mysterious elision of the Abel-Attfield-Letherby test from the schedule of the Bill of 1868 is old history, but it is useful as it goes to show that there is nothing new about the methods on which the flash-point inquiry is being conducted, and concerning which we are disposed to complain.

Scientific arguments and *data* have been repeatedly used in these columns to disabuse the minds of the mildly indifferent, of the notion that high-flash oils are not so safe as low-flash oils. This time we shall be contented to depend purely on a statement of facts intelligible to everybody, scientist or otherwise.

Without entering into details let us assume the low-flash partisans' indictment against high-flashing oils for burning purposes. How does it tally with experience? Let us see.

Oil flashing at about 120°F. Abel test, has, it appears, been used daily in the northern lighthouses for 20 years, and not a *single* accident has occurred. Trinity House demands an oil of 125°F., and accidents likewise have yet to happen. Contrast with this the fact that with ordinary petroleum flashing at 75° to 80°F. there is one death a week in London, and an average of one per day for the United Kingdom. All the London County Council experiments and "Lancet" commissions in Christendom cannot disprove the silent, gruesome testimony of a charred corpse. What, then, is the reason for so many "authorities" still pledging themselves to decry high-flash oil?

Again if, as the sellers of low-flash oil aver, on what ought to be trustworthy testimony, the oil of 78°F. by giving off light and inflammable vapours so quickly, makes the lamps in which it is burnt safe, whereas high-flash oil does not do so, but developes a high temperature in burning—if this is so why do those in authority in the North and at Trinity House incur nightly all the dangers of 125°F. oil when all the advantages of price, safety, and abundance cry aloud for the substitution of the 78°F. oil, which some of our greatest "experts" persistently advocate as the best and safest for everyday use by the public? We ask again why?

It cannot be the fault of the lamps this time, as no more perfectly modelled, stably constructed, or permanently stationary lamp than lighthouse lamps exist. Let the present

Parliamentary Committee insist on the dangerous 125° oil being supplanted for twelve months in Trinity House contracts with ordinary low-flash petroleum.

Now there are other questions we should like this same Committee to put to the American "experts" (not of the *third* degree we hope) who are coming over to prove that they cannot send us enough oil if we raise the standard from 73° to 100°F., and that 73° oil is so safe and nice to use.

How far have they sought in any way to ascertain if there was an outlet for the naphtha which they say will be thrown on their hands, just because 365 paltry British subjects are burned to death every year?

How is it, that with all their nicely prepared figures and witnesses intended to show that the scarcity of crude oil is such as to make it impossible to get enough burning oil to supply the world—how is it—that the Bureau of Statistics at Washington can issue the lie direct in the statistics of the exports of petroleum from the U.S.A. in September last? The figures show that while we are being humbugged about the scarcity of oil, there has been an increase of 9,700,000 gallons in the amount of illuminating oil exported as compared with September, 1895.

Also with crude oil so short there has only been a decrease in the exports of under 500,000 gallons out of a total of 11,000,000. We should have thought the exports of crude would have dwindled down to nothing or thereabouts if the sources of supply are so limited. This particular figure, moreover, is not as isolated one, for the total of the year's shipments of crude in 1892 was something over 103,000,000 gallons, and taking the September total for 1896 the year's total should be about 120,000,000.

At this juncture a momentary reference may be made to another aspect. Supposing crude is as scarce as the Standard Oil Company would have us believe, how have they managed to concoct in one year an extra 9,000,000 gallons of burning oil, for export alone, out of their diminishing supplies of crude? If for their own pockets' sake they can achieve this marvellous result, they can prepare us a reasonable supply of 100°F. oil, when we insist on having nothing below this flashpoint. Where there is a will there is a way, and where there is a market the Standard Oil Company will be well in it no matter what the flash-point be.

But to return to the main argument. In hearing the champions of the about-to-be "martyred" American producers, will the Committee keep prominently before them, the following facts from the official report of the U.S. Oil Industry in 1895—the latest authenticated returns?—The production of *crude* oil rose from 49,000,000 barrels in 1894 to all but 53,000,000 barrels in 1895. The most notable features of the year are summarised as follows:—

"(1) The great *increase* in production of crude, especially in Ohio, Indiana and California. (2) The extension southward of the *profitable* producing districts in the Appalachian range. (3) The rise in prices. (4) The decrease in stocks."

There are two points which want emphasising with regard to items 3 and 4. The price *rises* as the supply of crude increases, and it rises in England as well for the burning oil which, however, is still of the same old sudden-death 75° flash-point quality. And the decrease of stocks must be put in figures to be appreciated. Out of a total of over 5,000,000 barrels there is only a decline of 1,000,000 barrels. These are queer figures on which to try and prove that the supply of crude is diminishing.

Supposing even that raising the standard to 100° *did* cause a decrease in American shipments, have the Committee by their cross-questioning endeavoured to ascertain whether Russia could not make up the deficiency? If not, we should again like to know the reason. It might be better oil, but it certainly begins to flash at 81° F., while most of the American leaves off there, the bulk flashing at 76° F., or thereabout.

When Professor Mendeleef was giving evidence before the Committee it was expected that he would favour low-flash oil so as to further the sale of the Russian product.

It is a fact, however, that as a conscientious scientific witness he could not see his way to sacrifice his opinions to gold bugs, and boldly asserted that 100°F. should certainly be the standard for this country. In Russia they were anticipating making it even higher, and a premium was set on the use of the high-flash oil by lowering the Customs dues. Somehow this part of his evidence does not appear to have been made as public as it should. What is the reason?

Lastly, in the face of such testimony, how is it that a few experts are able to blind the Government, and compel it to turn a deaf ear to all the damning statements of a multitude of conscientious investigators and scientists who apparently labour in vain for the public safety? And what is the reason why a few of the most prominent authorities who have the flash-point matter in hand, are so manifestly anxious that the standard should not be altered, and palpably shirk the sifting of inconvenient evidence? Is this sacrificial love for brother Jonathan spontaneous like that of David for Jonathan—or is it "cultivated?" Men of honest convictions are never at a loss to justify their attitude, be it a mistaken one or not. Low-flash witnesses must do the same.

MERSEY AND IRWELL JOINT COMMITTEE

THE usual monthly meeting of this Committee was held on Monday at the offices of the Committee, in Mosley-street, Manchester. The Right Hon. Sir John T. Hibbert presided. The report of the Chief Inspector (Mr. R. A. Tatton) was submitted, and its adoption moved by Mr. T. W. Killick. The position of the following authorities was explained:- Mossley Corporation, Royton Urban District Council, Hollingworth Urban District Council, Aspull Urban District Council, Radcliffe Urban District Council, Limehurst Rural District Council and the Tintwistle Rural District Council. The sewage works of the Mossley Corporation were stated to be now in operation, and it seemed to be working regularly. In regard to Royton, Mr. Tatton reported that "the requirements of the Local Government Board have apparently now been complied with in every respect, and the chairman has given me his assurance that the work will be proceeded with as soon as the consent of the Local Government Board has been obtained for borrowing the money required. The total cost of the sewage works up to the present time has been £52,000., and when the additional borrowing powers, including the laying out of the land for filtration, have been obtained, the amount will be increased to £76,000., which on a population of 13,400 amounts to over £5. 10s. per head of the population." The local authority at Hollingworth had constructed sewage works and main sewers, but further application had been made to the Local Government Board for borrowing powers to complete the house connections. At Aspull the connection of the district sewers with those of Wigan had been completed. This removed the sewage from the watershed, and took it to the purification works belonging to the Wigan Corporation. At Radcliffe, the works for the purification of the sewage of the district were now completed and in operation. Works were in progress for bringing the sewage of Stand Lane to the existing works. Further time was asked for by the Limehurst and Tintwistle local authorities. A letter was included in the report from the Chorlton-cum-Hardy Ratepayers' Association, complaining of the foul condition of the brook at Chorlton-cum-Hardy, and asking that immediate steps might be taken to prevent pollution. Mr. Tatton reported that steps were now being taken to enforce the provisions of the Act against the persons and authorities polluting the stream. Mr. Killick remarked that they also had a complaint concerning this brook from the Withington Local Board. He would point out that the jurisdiction of the Committee was a concurrent jurisdiction. It was true that when they exercised that jurisdiction against any particular authority no one else could also bring an action against that authority. But if the Committee failed in their duty and did not bring an action, it was open to anybody else to take that course. The report was adopted. The report of the Consulting Sub-committee was considered and adopted. In regard to the Tintwistle and Limehurst local authorities it was decided that proceedings should be instituted. In other instances adjournments were made.

The following report of the Consulting Sub-Committee was presented in regard to the

MANCHESTER CORPORATION BILL.

"As the Joint Committee will be aware, the Corporation of Manchester are promoting an Omnibus Bill in the ensuing session of Parliament, and, among other things, they propose to apply for special powers with reference to the treatment of the effluent from the Corporation sewage works at Davyhulme. In this matter the Corporation have included the following clause in their Parliamentary notices and advertisements:—'To authorise the Corporation to discharge from and out of the effluent conduit and other works to be authorised by the intended Act, or some of them, or otherwise in such manner as may be prescribed or authorised by the said Act, the effluent from the sewage works of the Corporation at Davyhulme into the river Mersey, and so far as may be necessary for that purpose to amend or repeal the

visions of the Mersey and Irwell Order confirmed by the Local Government Board's Provisional Orders Confirmation (No. 10) Act, 1891, and the Mersey and Irwell Joint Committee Act, 1892.' In view of the wording of this clause, which, if passed, would restrict the powers of the Joint Committee, your Sub-Committee recommend that the clerk be instructed forthwith to take all the necessary steps and incur all necessary expenses in presenting a petition to Parliament in opposition to any clause of the proposed Corporation Act which would in any way affect the powers or jurisdiction of the Joint Committee."

The matter was described by Mr. Killick as "not pressing," and its consideration was adjourned.

Sir Henry Roscoe's report showed that of 16 samples of the effluents from the sewage works of various local authorities, taken during the past month, twelve were "good" and four "fair," none being bad.

The Patent List.

This list is compiled from Official sources in the Manchester Technical Laboratory, under the immediate supervision of George E. Davis and Alfred R. Davis, who report professionally upon the value of Chemical Patents.

APPLICATIONS FOR ENGLISH LETTERS PATENT.

Producing Fresh Water from Salt. H. Pope and W. Henneberg. 26,506. November 23.

Manufacture of Ferromanganese, or Copper Manganese, or Copper and Sulphur, or Sulphuric Acid from Sulphuretted Iron or Copper Ores. C. Schwarz and A. Weishut. 26,507. November 23.

Manufacture of Muriatic Acid or Chlorine and Chloride of Potassium from Calcium Chloride and Chloride of Magnesium, and other Suitable Chlorides. C. Schwarz and A. Weishut. 26,508. November 23.

Smoke Consuming Apparatus. W. M. Greaves. 26,602. November 24.

Smoke Consuming Apparatus. G. E. Wery. 26,639. November 24.

Disinfecting and Apparatus therefor. A. Zimmermann. 26,667. Nov. 24.

Manufacture of Steel. T. Hampton. 26,698. November 25.

Obtaining Benzol and similar Aromatic Hydrocarbons. G. Schultz. 26,771. November 25.

Manufacture of Calcium Carbide, etc. F. Dresser. 26,824. November 26.

Manufacturing Bicarbonate of Soda. A. J. Bambridge and G. Weddell. 26,839. November 26.

Improved Manufacture of Zinc. J. de F. Maunder. 26,851. November 26.

New Method of Manufacturing White Lead. F. W. Burger. 26,874. November 26.

Preparing Caustic Soda Solution from Soda Residues. F. J. Seyfried. 26,889. November 26.

Treating Purple Ore and other Bye-products for the Extraction of Iron. T. C. Fawcett, Ltd., and J. Swallow. 26,906. November 26.

Salt Grinding Apparatus. J. Achleitner and K. Resch. 26,999. November 27.

Manufacture of Varnish. J. E. and C. S. Bedford. 27,038. November 28.

ABSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

These abstracts are specially prepared for the Chemical Trade Journal, and ALL RIGHTS *of publication are* RESERVED. *This is the earliest series of abstracts of Chemical and allied patents accessible to the public.*

An Improved Process for the Treatment of Metalliferous Ores and Products. G. A. Ashcroft, Willyama Works, Globe Works, Grays, Essex Eng. Pat. 14,783. August 3, 1895.

This is a modification of patent 13,534, 1895, and is mainly dependent upon the substitution of anodes of iron and copper mattes, regulus, &c., for those described in the specification named above. Thus, while the zinc in the solution being electrolysed, is deposited at the cathode, copper and iron are going into solution, the copper being subsequently removed by electrolysis, and the iron salts raised to the ferric state, in which form they can be conveniently used to leach a fresh batch of zinc ores, as described in the earlier patent. Three drawings show, respectively, a convenient form of tank, with agitators for leaching, a cascade of electro-depositing vats, and a general plan of the plant.

Improvements connected with the Electrical Deposition of Zinc. R. Heathfield, 1, Leadenhall-street, London, E.C., and W. S. Rawson, 21, Greycoat-gardens, London, S.W. Eng. Pat. 23,097. December 3, 1895.

An apparatus is described for depositing, electrolytically, the zinc contained in solution in an alkaline electrolyte (compare pat. 20,365, 1894, *C. T. J.* 437, p. 212). A tank of some non-conducting material is used, the anodes being made of perforated iron or iron gauze. Iron gauze baskets containing zinc scrap are disposed on the side of the anode farthest from the cathode. An automatic switch is provided, which connects these baskets with the anode when the latter is not connected with the cathode. There are two drawings.

Improvements in Apparatus for Treating Nickel Ores, and other Materials containing Nickel, with Carbon Monoxide. L. Mond, 20, Avenue-road, Regent's Park, London. Eng. Pat. 23,665. December 10, 1895.

The plant detailed in specification 23,665 A, 1895 (*C. T. J.* 497, p. 337) is rendered applicable to the process specified in the title. By duplication of the reaction towers the material can be treated and retreated with a reducing gas, and then with carbon monoxide to form nickel carbonyl, which is subsequently decomposed by heat, metallic nickel being deposited, and carbon monoxide liberated. A special feature is the construction of the rotary feed valves attached to the conveyors which transport the material under treatment from one tower to the other. They enable the material to pass from the atmosphere of one gas to the other, while out of contact with the air, without allowing the gases to intermingle.

Improvements in and Relating to Calcium Carbide or Analogous Compounds, and the Treatment of the same to form a uniform composition. J. A. Deuther, 114, Purchase-street, Boston, U.S.A. Eng. Pat. 20,598. September 17, 1896.

Calcium carbide as manufactured is not of uniform composition, and yields varying quantities of acetylene gas when treated with water. To overcome this the raw carbide is ground and mixed with a binding material to form a mass which, when treated, will yield regularly a definite volume of gas, depending upon the size of the mass employed.

A Process for Rendering Waste Leather Soluble and Applicable as a Manure. J. Hudson, 29, Red Lion-street, Clerkenwell, London, E.C. Eng. Pat. 289 January 4, 1896.

The leather is soaked in water containing barm or other ferment, and thus subjected to fermentation, whereby the nitrogenous contents are rendered available for manurial purposes. A convenient method of operating is to place a portion of fermented leather in the centre of an unfermented mass, in which way the fermentation is started. The size of the mass can be increased by the addition of freshly soaked leather as may be convenient. When thoroughly fermented, the leather is dried, pulverised, and packed ready for use.

A Process for the Production of Blood and Slag Manure. W. Barclay, 24, Dean-street, Newcastle-on-Tyne. Eng. Pat. 22,160. November 21, 1895.

Either blast furnace, heamatite, or Normanby slag is mixed with an equal proportion of fresh, coagulated, dried, or dissolved blood. The proportion of slag may be varied according to the amount of nitrogen in the blood used. Its object is to help render the blood inoffensive and dry enough to be conveniently employed as a fertilizer. After mixing, the whole can be allowed to dry by natural means or dried off artificially at a temperature between 14°C. and 37°C.

Improvements relating to the Manufacture of White Lead for White Lead Paint. C. D. Ismay, Ouseburn Lead Works, Newcastle-on-Tyne. Eng. Pat. 23,969. December 14, 1895.

The object is to do away with the stoving process. To this end a specially constructed pug mill is used. It is steam jacketted, and covered in so that it can be exhausted to form a vacuum. While the mixing of the oil and pigment is progressing the pug mill is heated up to a temperature between 150° and 250°F. Much of the water rises to the surface and is removed through channels specially provided. Under the combined influences of the temperature and vacuum the remainder is in course expelled. The final grinding rolls may be hollow, and heated so that when the product is conveyed to them the very last traces of moisture may be removed, but this final heating is seldom necessary. In the general way, therefore, the only special plant required is the closed and jacketted pug mill.

OIL TRADE AND THE SHIP CANAL.—The Gas Committee of the Manchester Corporation has at present a scheme in progress which will, when completed, bring a new trade to the port of Manchester. The Committee's installation of plant for the manufacture of carburetted water gas will involve the use of large quantities of oil—either petroleum or Russian solar distillate. It is intended to import this oil in tank steamers by way of the Ship Canal, and to store it in oil tanks which are now being erected on a plot of land adjoining the Corporation's foreign animals depôt at Old Trafford. A wharf will be constructed along the canal, and each of the two tanks will hold half a million gallons of oil. Arrangements have been made for carting the oil in suitable tank carts from the Old Trafford tanks to a third holder at the Bradford-road Gasworks. The wharf, tanks, &c. are expected to be ready for use early next year. Hitherto there has been no provision for storing oil in bulk at Manchester, and no tank steamers have yet been up the canal. It is to be hoped that before long oil tanks for general use will also be built, for without such provision the port cannot compete for the trade on equal terms with its better-equipped rivals.

SOCIETY OF CHEMICAL INDUSTRY.

LIVERPOOL SECTION.

THE monthly meeting of this section was held on Wednesday, Dec. 2nd, at University College. Mr. Arthur Carey read a paper on "rescue apparatus," recently introduced for use amongst noxious gases, the efficiency of the apparatus depending largely upon the absorptive power of a material, the production of which is due to Mr. Towers, of Widnes. Following Mr. Carey's paper was an interesting communication by Mr. Douglas Herman on cases of poisoning by carbonic oxide, and on the use of oxygen gas as a restorative in such cases.

The particular case to which he referred was that of a French woman who had been committed to penal servitude for the murder of her husband. The evidence against her was largely circumstantial, and after five years unrelenting investigation, prosecuted at his own expense, her advocate, M. le M. Goujon, has been able to prove that the house in which the murder was supposed to have taken place was a death-trap owing to the escape of carbon monoxide gas from a flue which passed under the house from a neighbouring lime kiln.

Details of this extremely interesting case have recently appeared in the daily press, and it appears that through the efforts of her advocate Mme Druaux has been released and compensated by the French Government for the injury done to her by such a miscarriage of justice. In connection with these papers a discussion was carried on, the question of the advisability of mixing carburetted water-gas with illuminating gas receiving a considerable amount of attention from the various speakers. Mr. Geo. E. Davis (chairman of the Manchester section) said he had come as a visitor to hear several papers which he had anticipated would be of interest, and after what he had heard he should not go away disappointed. He suggested that, considering the way in which the Druaux case had ended, it would be a fitting thing if the section passed a resolution embodying congratulations and thanks to M. Goujon on the success of his untiring endeavours to see Mme. Druaux righted.

Subsequently the following resolution was moved: -

"La section de Liverpool de la Society of Chemical Industry profite de sa réunion du 2 décembre, 1896, à l'University College, à Liverpool, pour offrir à Monsieur le Maître Goujon ses félicitations cordiales, et sincères, sur son succès dans l'affaire Druaux, en lui exprimant de plus son admiration de l'industrie intélligente et persévérante qu'il a porté dans la direction de cette affaire, ainsi que de la loyanté qu'il a témoigné envers un pauvre client dont on n'a pu attendre à aucune récompense, si ce n'est pas se sentir d'avoir fait honorablement son devoir; et les membres prient à Monsieur Herman de vouloir bien transmettre à Monsieur le Maître Goujon cette résolution." The resolution was duly adopted.

Mr. Herman then proceeded to read a paper on "A Substitute for Tartaric Acid in the Preparation of Effervescing Beverages." He said:—

Tartaric acid is a commercial article which commands a ready sale for various uses, and which fluctuates in price, not so much from variation in demand as from vicissitudes of climate, &c., in the wine-growing countries. Great Britain not being a wine-producing country, we are forced to go abroad for the argols and tartar we require for the manufacture of tartaric acid, in addition to the considerable quantity we buy ready made.

For one purpose to which it is commonly applied tartaric acid is by no means essential. I allude to the preparation of effervescing beverages, particularly in the domestic gasogene, or seltzogene. I think I shall not be far wrong in stating that the value of the tartaric acid consumed in the United Kingdom cannot be much less than £50,000 a year, nearly the whole of which goes to foreign countries, principally France and Germany.

In the preparation of aerated waters on a large scale in factories sulphuric acid is used, either directly for the disengagement of CO_2 from whiting or the preliminary preparation of liquid carbonic acid, but the employment of liquid sulphuric acid, in the domestic gasogene, is evidently out of the question. But although the difficulties in the way of employing sulphuric acid in gasogenes, appear insuperable when the acid exists as a liquid, they vanish entirely when the acid is supplied as a solid bisulphate. The idea of employing a bisulphate for the liberation of CO_2 from carbonates, is, of course, not new, and I believe it has been applied in factories; but there were several practical difficulties in its application to gasogenes, which have only recently been overcome. I have said that with acid in this form the difficulties vanish, but I might, perhaps, have gone farther, and said that for the disadvantages are substituted some solid advantages. Thus the acid being cast in the shape of a cube—or in the larger sizes a right angled prism—it is patent to the eye of the user that the correct charge is present, and the safety of the gasogene insured, with acid in the form of crystals or powder, it is obvious that any carelessness on the part of the packer may produce a charge, giving either undue pressure, or, on the other hand, one in which the water is insipid through insufficient aeration. Again, solid blocks of acid, such as these, present much less surface to the solvent action of the water, than do small crystals of tartaric acid; hence the evolution of CO_2 is more gradual and uniform, ensuring better aeration of the water, without undue pressure. It is commonly recommended, when employing tartaric acid charges, to draw off half a tumblerful five minutes after charging, and there is good reason for the recommendation because there is a tumultuous evolution of CO_2 immediately the tartaric acid charge is wetted. With acid cast into solid blocks, this precaution, owing to the gradual evolution of CO_2, is unnecessary, and above all there is a saving, amounting from 1-30 to 1-6th (according to the size of the gasogene) of the aerated water produced.

The greater margin of safety afforded by this steady evolution is taken advantage of to make the charge considerably stronger—some 12½ per cent.—than the ordinary tartaric acid charges, and this extra 12½ per cent. of gas has naturally a marked effect in increasing the sharpness of the aerated water.

Mention should be made of certain minor advantages incidental to the form of packing adopted, such as convenience, the certainty that when wanted for use there is acid equivalent to the soda, and *vice versa*, while the charges are so adjusted that the solution in the top globe is always faintly alkaline. Moreover, I may point out the absolute moisture-proof nature of the wrapping employed for the bisulphate. It is not an uncommon experience, with the ordinary tartaric acid charges, to find that they have been ruined through being kept in a damp place.

This paper has extended to a greater length than I originally intended, but on looking into the subject I found it was of greater importance than I had at first imagined. Sulphuric acid is still one of our staple manufactures, and there are other applications of this solid form of acid which I hope to be able to make known on some future occasion.

MANCHESTER SECTION.

The second meeting of the session was held at the Victoria Hotel, Manchester, on Friday, December 4th, Dr. Schunck, the President of the Society, being in the chair. Dr. Stevenson Macadam, of Edinburgh, read a paper on "Safe and Unsafe Oils for Lighting and Heating Purposes." He commenced his paper with an interesting summary of the history of the use and testing of mineral oils for lighthouse illumination, and then proceeded to review the legislative restrictions and proposals that had been made from time to time in connection with the use of mineral oils for illuminating purposes. He pointed out that in 1870 he investigated and reported on mineral oils for lighthouse purposes, recommending 150° open test for the flash point. Eventually 120° close was settled on, and with such oil not a single accident had occurred in the northern lighthouses for the past twenty years. The first attempt at the regulation of the flash point of oils was made by the Government in 1862, and in the Act then passed permission was given to search for oil flashing below 100° F. in the same way as for gunpowder. Owing to the absence of definite instructions as to how to test the flash point, errors and differences were constantly arising, so that in 1860 Messrs. Abel, Attfield, and Letherby agreed on a specific test of 100° F., in an open cup, half full of oil and heated by a water bath. This test, the author stated, had been found in practice to give results agreeing substantially with those obtained in Prof. Abel's apparatus, which was subsequently introduced and is to-day the standard tester. Strange to say, however, within a week of the drafting of the schedule embodying this specified test (which was the conjoint production of the gentlemen named above), the directions for testing were cancelled. Sir J. Ferguson, who had charge of the Bill, explaining that he had done so on the advice of the Petroleum Association and Sir F. Abel (then Prof. Abel), and this advice was followed, despite the protests of the other experts who had co-operated in the formulation of the revised method. In 1876 the Abel tester was introduced (an excellent apparatus *per se*), and it was then contended that the difference between the old open test of 100° F. and Abel's close test was 27° F.; the standard of safety was therefore reduced to 73° F. and remains there to-day. Had the standard of 100° been adhered to during the last ten years there would have been many fewer fires from the employment of mineral oils, and many lives would have been saved.

Dr. Macadam then proceeded to review the work he had done in connection with his evidence given before the Parliamentary Committee which sat last session and is to sit again. He very pointedly confirmed the testimony of Dr. Lobry Le Bruyn and others that by removing 10% of the petroleum spirit with which American oil is charged, and which is also in Russian oils to a less extent, a uniformly reliable oil is obtained. These experiments were most carefully conducted, to avoid "cracking" in the distillation, and precisely similar results were obtained when superheated steam was used for distilling off the light spirit. By such treatment it was shown that an American oil standing at 78°—81°F. flash point, rose to 103°—105° flash point, when 10% had

been removed. A Russian oil of 81°—83° rose to 104°—106° F. He next discussed the possibility of finding a market for this light spirit when removed from burning oils, and indicated several existing outlets, such as for dry cleaning and as a source of power for motor cars. Having established the commercial practicability for thus rendering lamp oils safe, the next point was the influence, if any, on the lighting power. Direct experiment showed there was practically no change. In the course of a very exhaustive series of trials on the lighting power, and other properties of mineral oil for lighthouses, the speaker had found it best to express the total light in pounds of sperm per gallon of oil, and on this basis ordinary low flashing American oil gave 19·85 lbs. per gallon and when treated 19·71. At the same time the steadiness and such like of the flame was unaffected, and the wicks if anything stood better. Another point which had been very clearly brought out was that by removing 10% of the light spirit it was entirely erroneous to contend that a corresponding 10% of the heavy end of the oil had to be likewise removed. Such was not the case at all. With regard to the removal of the light spirit it should be noted that by heating the oil to 80°F. in a water bath and aspirating air, a kind of air-gas was obtained, and when only 7% had been vapourised the flash point rose from 78°F., or thereabouts, to 104°F.

It was also a most important fact that by mere exposure in an open vessel at the ordinary temperature (about 60°F.) the light spirit evaporated quickly.

In three days 5·7% was lost, and the flash point rose from 81°F. to 102°F. In nine days as much as 26% of the total bulk evaporated. Similar results were not attainable with high-flashing oils. Touching the cost of treatment it could not exceed ¼d. per gallon, and this could only be counted an extra expense provided there was no outlet for the petroleum spirit *per se*. There was no actual additional cost in the distillation, as it was only a case of turning the first runnings into the naphtha tanks for a few minutes longer than it was customary to do now.

Coming to the question of lamps, a number of experiments were described, and the results obtained with lamps costing from 6d. to 10s. each were related. Dr. Macadam made special allusion to the temperatures which the oils in the founts of many lamps attained during an evening's burning, and showed that an oil having a flashing point less than 100°F. was at all times dangerously near the exploding point. He submitted that there was really no reason for the employment of such dangerous oils as were now sanctioned in this country, and a return to the proper safety limit of 100°F. would ensure the public safety being cared for, whilst the quality of the oil would be improved. With regard to the lamps now in use, Dr. Macadam expressed the opinion that many of them were faulty in construction, even some of the better class lamps, and he gave a number of suggestions for the better construction of lamps of even the cheapest forms. He also dwelt on the time taken to ignite with a taper a piece of cloth saturated with high-flash oil, as compared with a piece saturated with an equal quantity of low-flashing American or other oil, which ignited at once.

To summarise his paper, he contended that oils flashing below 100°F. were not safe for public use. He was decidedly of opinion that this standard should be restored by law, and that all oils should be labelled as of such and such a flashing point. Oils below 100°F. he would have labelled "Mineral spirit, but not safe for house lamps."

The Chairman, after a few appreciative remarks on Dr. Macadam's paper, moved a vote of thanks.—Mr. George E. Davis, in seconding the vote and opening the discussion, supported Dr. Macadam in his experience of igniting high and low-flash oils on cloth or blanket, and cited some experiments he had done with the late Dr. Schorlemmer in connection with a murder case in Manchester several years ago. It took a long time for the high-flash oil to reach the ignition point, under such conditions, as compared with low-flash oil. He also described an actual experience, tending to show that retailers were liable to mix up benzoline and petroleum when serving customers. In the case of a sample drawn from two cans the flashpoint was found to be 62° or 63°F. A check sample, drawn from one can only, tested 82°F. Oil so sold to ordinary consumers would most likely have led to an accident. Another thing that had occurred to him was this—when the contents of a tank steamer are being pumped into the empty storage reservoirs what becomes of the displaced air which is saturated with the vapour of petroleum spirit? As far as he knew no provision was made for dealing with it. There was little doubt that owing to the want of a better market for the petroleum spirit the Americans left as much of it as possible in certain grades of oil, which—like Ally Sloper when he found a snail in his garden—they dropped over their neighbour's wall. He looked, however, to the ordinary course of trade and motor cars to remedy this.—Dr. Angel referred to the experiments on lamps made by the London County Council and the "Lancet," and quoted in support of his arguments in favour of the lamp theory the "Goliath" and Lord Romiley accidents.—Mr. E. Powell asked for information as to the meaning of the brand of 120° test, which was on the barrels of ordinary American petroleum sent in to this country.—Mr. Terry, Mr. G. Hurst, and Mr H. Grimshaw also took part in the discussion, the latter remarking on the peculiarity of the fact that the introduction of a new tester should in any way influence the temperature at which the oil gave off dangerous vapours.

In reply, Dr. Macadam said he was glad to find Mr. Davis could corroborate his experiments. With regard to the London County Council form of lamp he could not agree with Dr. Angel, and if all that was described was done accordingly, he was in the same position as Dr. Angel himself, namely, that like him he really could not understand how the lamp failed to cause an accident. In answer to Mr. Terry, he explained more fully the dry cleaning process. The gravity of the spirit was 0·752 for American and 0·785 for Russian. He could not say whether it left an oily residue or not. As to the outlet for this spirit, he knew one firm of cleaners who recovered all they could, and yet wanted 40,000 gallons a year to make up the unavoidable loss by evaporation. He could not explain the 120° brand. It was another point which could not be understood. After putting and carrying the vote of thanks the meeting, which was well attended, terminated.

EXPORTS OF PETROLEUM FROM U.S.A.

THE Chief of the Bureau of Statistics, Washington, gives the following returns of the exports of petroleum and petroleum products for Sept., 1896. The total shipments were 80,942,500 gallons, compared with 71,344,442 gallons in Sept., 1895. The total for the nine months ending Sept., 1896, was 681,882,251 gallons, against 613,546,784 gallons during the same period in 1895. The details of the shipments are as follow:—

			Gallons.
		CRUDE PETROLEUM.	
Total,	Sept.,	1896	10,632,003
,,	,,	1895	11,462,881
		NAPHTHAS.	
Total,	Sept.,	1896	1,690,502
,,	,,	1895	1,624,639
		ILLUMINATING.	
Total,	Sept.,	1896	64,637,802
,,	,,	1895	54,897,093
		LUBRICATING AND PARAFFIN.	
Total,	Sept.,	1896	3,977,321
,,	,,	1895	3,356,721
		RESIDUUM.	
Total,	Sept.,	1896	4,827
,,	,,	1895	3,018

EXPORTS OF ALKALI AND BLEACH.

THE following returns, which are taken from the official foreign and colonial statistics of the United Kingdom, give the amount and value of alkali and bleaching materials shipped to the undermentioned countries for month of October, 1896, as compared with 1895:—

ALKALI.

Port.	1895.	1896.	1895.	1896.
	Cwts.	Cwts.	£	£
Russia	38,321	37,376	12,329	11,347
Sweden and Norway	19,349	18,531	3,628	3,625
Germany	15,871	13,113	4,341	3,297
Holland	10,128	13,730	1,857	2,574
France	4,116	4,074	1,387	1,433
Spain and Canaries	38,612	22,007	12,972	7,300
Italy	21,317	18,883	6,032	5,293
United States	292,127	155,436	64,794	36,440
Australasia	18,467	19,189	5,548	6,549
British North America	44,198	51,484	10,525	11,002
Other countries	121,583	93,920	35,901	24,989
Total	624,089	447,743	159,314	113,849

BLEACHING POWDER, ETC.

Port.	1895.	1896.	1895.	1896.
	Cwts.	Cwts.	£	£
United States	70,964	55,776	25,608	18,017
Other countries	60,391	48,977	20,509	16,282
Total	131,355	104,753	46,117	34,299

Legal Intelligence.

SUPREME COURT OF JUDICATURE.

COURT OF APPEAL.

(Before the Lord Chief Justice and Lords Justices Lindley and A. L. Smith.)

ALMA VENEER FELT CO., LTD., *v.* FISHER.

This was a case in which Mr. Astbury, Q.C., appeared in support of an appeal by the defendant in the case of the Alma Veneer Felt Company, Limited, *v.* Fisher, from an order of the Vice Chancellor of the County Palatine of Lancaster dismissing a motion to vary the finding of the registrar by which the sum of £85. 7s. 10d. was held to be due from the defendant to the plaintiffs (*C. T. J.* 496, p. 323). The plaintiffs were the owners of letters patent for "veneering" and "dusting" felt hats with small particles of fur, their registered offices being 15, High-street, Manchester. The defendant, Robert William Fisher, of Ashton-under-Lyne, obtained a licence in 1893 to use the plaintiffs' patent in the manufacture of felt hats, and he had to make monthly and half-yearly returns of the number of hats to which he applied the patent, in order that the plaintiffs might ascertain the royalty due to them. In June, 1895, the plaintiffs commenced an action against the defendant for an account to be taken by the court of all hats "veneered" and "dusted" by the defendant under the licence. That action was dismissed by the court, but that decision was reversed by the Court of Appeal, who directed the accounts to be taken. Upon that the defendant repeated the accounts he had already given, but the registrar came to the conclusion that the books kept by the defendant could not be relied upon, and found that there was a further sum of £85. 7s. 10d. due from the defendant to the plaintiffs in addition to the sum he had already paid. Against that finding the defendant now appealed. Before the Vice-Chancellor the plaintiffs called evidence to show that in the dyeing of hats at the defendant's works undusted hats were placed in the same dye kettle as "veneered" and "dusted" hats, and that by this means particles of fur which came off the "veneered" and "dusted" hats adhered to the undusted hats, which thus became dusted, though not as perfectly as the properly dusted hats. The defendant denied the allegations of the plaintiffs in this respect, stating that the dye kettle was thoroughly cleansed after the dyeing of the "veneered" and "dusted" hats, and before the undusted hats were put in. After hearing counsel on the other side, their Lordships came to the conclusion that the account kept by the defendant of the number of hats dealt with by him under the licence granted by the plaintiffs was not to be relied upon, and the appeal was, therefore, dismissed with costs.

MANCHESTER ASSIZES.

NISI PRIUS COURT.

(Before Mr. Justice Kennedy and a Common Jury.)

CHAPPIN *v.* SHALLCROSS.

In this case, which was heard on Saturday last, Charles Chappin, chemical maker, brought an action against his former employers, Thomas Henry and Arthur Shallcross, trading as Shallcross Brothers, chemical manufacturers, Excelsior Works, to recover damage for wrongful dismissal. Mr. M'Keand appeared for the plaintiff, and the defendants were represented by Mr. Shee, Q.C., and Mr. W. H. Shawcross. The plaintiff's case was that he was employed by the defendants to mix chemicals under an agreement which was not to terminate till September, 1897. He alleged that he was discharging this duty as well as doing other work, but the defendants, having learned his methods, tried to do without him, and in July last he was told by one of the partners to go about his business. His wages at that time were 35s. per week. He accordingly left, and had not since returned. The defendants denied that they dismissed the plaintiff, and counter-claimed for £40. loss which they alleged had been caused by the plaintiff's negligence and incompetence.—The jury found for the plaintiff, and awarded him £50.; they also decided in his favour on the counter-claim.

ROUGH ON ELECTRIC LIGHT COMPANIES.—A man in Germany, accused of stealing motor power from an electric current company, has been acquitted on the ground that only a movable material object can be stolen, and electricity was no such material object. The company appealed against this judgment, but the superior court confirmed it. It, therefore, seems that in Germany any one clever enough to tap an electric current for his own use can do so with impunity. In other words "He that prigs (electricity) what isn't his'n, when he's caught don't go to prison." It certainly seems very odd. Electricity is "movable" enough in all conscience, and if it is not a "material object" it cannot be used—but it is. It was no fool who stated that occasionally the "Law's a Hass."

HOW TO ENSURE ECONOMY IN FIRING.

THE coal bill is always an item of great importance in all manufacturing concerns, and is one which is professedly watched most carefully. There are, however, many ways in which a more careful check can be kept upon the economical use of fuel. Some 18 or 20 months ago, under the title of Arndt's "Econometer," we called attention to a most useful instrument for ascertaining how far perfect combustion was being attained (*C. T. J.* 400, p. 36). Subsequently we drew attention to the fact that Messrs. Meldrum Bros., City-road, Manchester, were the English agents. It now appears that this firm, in conjunction with Mr. Wilckes, of Paris and New York, are actively engaged in making this excellent and handy contrivance better known. There are hundreds working on the Continent—and working well. But to come nearer home, several have already been fitted in this country for such representative firms as Messrs. Guinness's Brewery, Dublin; Messrs. Sir Titus Salt, Bart., Sons, Ltd., Saltaire; Messrs. Butler's Crown Brewery, Birmingham; Messrs Geo. Armitage and Co., Dyers, Bradford, Yorkshire; The Newcastle Electric Supply Co., Ltd., Newcastle-on-Tyne; The Ford Paper Works, Hylton, nr. Sunderland. In addition to these we have had an opportunity of seeing the apparatus at work on Messrs. Meldrum's boiler furnaces.

This firm is fitting at present some of the largest works in the woollen and other trades, and hope to have a few hundreds working by the end of next year. This belief is founded upon the encouragement received from many works who cannot arrange to fit them at the moment, and include chemical, machine, boiler, cotton, metal, paper, cereal, and other works.

The instrument itself shows continuously if combustion is good or not, by indicating the amount of CO_2 contained in the combustion gases. As particulars of the working principle and an illustration of the apparatus have already appeared in the Journal (No. 400, p. 36), reference must be made thereto on these points.

In almost all cases it is found that too much air is admitted to the furnace, which is not only unnecessary, but which cools the boiler plates, and has to be raised to the high temperature of the gases leaving the boiler. As this heating can only be done by the means of fuel, it means saving coal to check this superfluous influx of unnecessary air. The checking is effected by adjusting the damper, or keeping a thicker and more uniformly covered fire over the fire-bars.

The Econometer is of great value, especially in this country, as with so many and varied modes of firing, such as forced draught, mechanical stokers, dust-fuel firing, gas firing, &c., there is generally more air admitted than necessary.

Under all these different systems, by aid of the Econometer, the fuel or air can easily be regulated to the necessary quantity, thus saving a considerable amount of money.

We must, however, call the attention of all users to the fact that the Econometer, like all good things, needs a little consideration and care, which point must not be neglected. It is very easily used, and can be attended to by any sensible stoker, and when so dealt with is of the greatest value.

Comparative tests made by many firms show that the indications of the Econometer are perfectly reliable.

It is quite a common thing that people fire for years with 4 to 5% CO_2, meaning that they lose theoretically 36 to 45% of their fuel, when they really need lose only 10 to 15% of their fuel, as in practice it is hardly possible to check the air supply more than this. This is an important economy, and the Econometer enables it to be put into effect to good purpose.

REPORT OF THE GERMAN GOLD AND SILVER REFINERY.

CYANIDE IN THE TRANSVAAL.

THE twenty-fourth annual report of the German metallurgical works at Frankfort-on-Maine (Deutsche Gold und Silber-Scheide-Anstalt), presented to the shareholders at the annual meeting on October 6th, states that although the gross profit for the year is larger than that for 1894-95—viz., 1,874,753 marks, of about 11 3/5d. each, against 1,866,381 marks. The net profit is slightly less, in consequence of certain extraordinary expenses, amounting to about 250,000 marks. Hence there remains a net profit of 938,656 marks against 1,122,082 marks in the previous year. The unusual expenses referred to have been principally caused by the writing off of the expenses for establishing a cyanide of potash factory in Pretoria (Transvaal), and the stoppage of the factory's melting works at Gmuend. With regard to the Transvaal cyanide of potassium factory the report states that the company were compelled to establish this factory in order to prevent the entire Transvaal cyanide of potassium industry from being lost to the firm, because competing manufacturers had informed the Transvaal Government that cyanide of potassium would be made in the Transvaal, using crude material existing in the country, and had asked for a

monopoly for its manufacture. The Frankfort works therefore decided to be first in the field, with the result that it has now been definitely proved that all raw materials must be imported, and that cyanide of potassium cannot be made profitably in the Transvaal. The Volksraad, or Legislature, has been informed of the result of the experiment, and has been petitioned not to grant a monopoly concession or to place a high customs duty upon cyanide of potassium, which is a necessity for the local gold mining industry. The whole of the money sunk in that undertaking—viz., 103,000 marks—has therefore been written off as a dead loss. Referring to business operations generally, the works state that the firm's turnover for the year in chemicals made by the works amounted to 3,354.394 marks, and in chemicals not manufactured by the works to 13,414,692 marks. The metallurgical section of the works has been fully employed, and the operations have resulted in a profit as large as that of the previous year. The company have commenced the manufacture of a new form of gold, known as sponge gold (schwammgold), which is specially intended for use for filling teeth. It is said to have been favourably received in dental circles, and much attention is now being paid to the article. Business in the chemical branch has been, on the whole, satisfactory, although special efforts have been necessary in order to maintain the company's position in the cyanide of potassium market. So many firms have now taken up the manufacture of this article that there was practically no profit left. The turnover of the ceramic section has been considerably increased, so much so that, although prices are generally very depressed, the profit has been slightly in excess of that of the preceding year. The manufacture of gold paint for ceramic purposes has become subject to such keen competition that sales must be made almost at the cost of the material. The various silver mining companies in which the Frankfort works are interested have yielded fairly satisfactory results. The Roessler and Hasslacher Chemical Company in America has had a very good year, and the Frankfort works in conjunction with that company have opened an electro-chemical factory at Niagara, which recently began operations. With regard to the net profit of 938,656 marks, the sum of 458,813 marks is absorbed by the payment of interest on debentures. The ordinary shareholders will receive 12½ per cent. dividend, 22,340 marks will be carried forward, 35,000 marks given as bonuses, and 47,502 marks go toward various pension funds.

LIVERPOOL DUES ON SALT, LEAD AND MINERALS.

PROPOSED REDUCTIONS.

IN the course of the proceedings of the last monthly meeting of the Liverpool Chamber of Commerce, Mr. G. H. Cox moved the minutes of the Charges of the Port Committee, which included a recommendation to the Mersey Docks and Harbour Board that the dues chargeable on *salt*, *tinplates*, *lead*, and *minerals* be reduced. He said that the committee had come to the conclusion that on all those articles a considerable reduction was absolutely necessary if these trades were to be preserved to the port. For his own part he must say he should like to see the Dock Board take in hand the whole schedule of rates, as he considered it required a great deal of tackling. He would personally go so far as to say that if the Board could see their way to it, one tonnage rate should be adopted all round. However, that was perhaps rather too large an order. With regard to the matter of Dock Board finance, some important members of the chamber had thought that this subject should be gone into again, and a sub-committee had been formed, but so far they had not yet come to any conclusions in the matter. He would only say this, that he thought most people were agreed that considerable savings might be made in the matter of the finances of the Dock Board, and such savings would be of great importance to the port just at present. Anybody who looked at the *Bill of Entry* from day to day, or who read the newspapers, must see that a vast amount of trade was drifting past Liverpool. It was not confined to cotton, but comprised corn and timber and other articles, and if these trades were to be preserved to Liverpool it was perfectly evident they must have further large reductions in their charges, as well as get the railway companies to help them in the matter.

SALT SHIPMENTS TO THE EAST INDIES.—Messrs. Thomas Higgin and Co. report that during the eleven months from January 1st to November 30th the shipments of salt from Liverpool to Calcutta amounted to 113,877 tons, and to other Indian ports to 17,064 tons. The clearances to Calcutta for the same period last year amounted to 116,169 tons, compared with 226,596 tons in 1894, and 159,475 tons in 1893. The clearances from other ports for Calcutta during the past eleven months were 57,447 tons, while the amount sent to other Indian ports amounted to 4,500 tons. The probable clearances for December are—to Calcutta 28,800 tons, and to Rangoon 2,000 tons.

Trade Notes.

WHERE STEEL BARRELS EXCEL.—A scene of some excitement was witnessed in Commercial-road East, London, one recent Saturday morning. About half-past eight o'clock a number of empty barrels lying by the roadway caught fire, and blazed with considerable strength. A number of men endeavoured to extinguish the fire, when a sudden gust of wind drove the flames in their direction, and five of them were so seriously burned about the face and hands that they were removed in cabs to Poplar Hospital.

PROPOSED USE OF MOTOR CARS.—A staff of engineers, acting on behalf of the Liverpool and Lancashire Transport Company, have just completed a survey to the roads between Liverpool and Manchester with a view of ascertaining their adaptability for the conveyance of merchandise between these competing cities by motor power. The surveyors report them well adapted for that purpose. Starting from the ships' side at Liverpool to the Manchester warehouses, the cost, it is calculated, for conveying goods by this means will be about a third the present railway rates.

DANGEROUS ICED CREAM.—Dr. Littlejohn, medical officer of health for Edinburgh, recently presented a report to the Public Health Committe on the ice-cream shops in Edinburgh. These number 78, at rentals varying from £10. to £60. Twenty-three were without water-closet accommodation, and in the large proportion of the conveniences which were found to exist there was an absence of the most ordinary condition of cleanliness. The storage for ice was most unsatisfactory. In only 39 cases did the occupants live apart from the premises. It was high time that this branch of trade was put under proper supervision. Even more important than the sanitary was the moral aspect of these shops. Specimens of ice cream, taken from what appeared to be the most insanitary of these shops showed, after analysis, that nothing of a highly objectionable character had been detected.

ELECTROLYTIC-PLATING APPARATUS COMPANY.—In connection with the improved process, described in the *Journal*, No. 483, p. 117, a company has just been registered with a capital of £50,000., in £1. shares, to acquire the benefit of an existing invention in relation to the electrical deposition of metals, to enter into an agreement with Alfred S. Smith and Sons, of Walsall, and Thomas Deakin, plater, of Walsall, and to carry on business as platers by electrical deposition of nickel-silver, copper, brass, zinc, tin, silver, gold, aud other metals, and as metal-tube manufacturers. The subscribers are :—Alfred S. Smith, Sutton Coldfield, manufacturer ; Thomas A. Smith. Walsall, manufacturer ; William D. Cozens, Walsall, tanner ; Roland J. Smith, Walsall, manufacturer ; Sydney Smith, Sutton Coldfield, manufacturer ; Frederick T. Cozens, Walsall, tanner ; Francis Baylis. Walsall, manager.

PHOSPHO GUANO COMPANY.—An extraordinary general meeting of this company was held on Monday, at the Cannon-street Hotel, for the purpose of confirming the resolutions passed at the meeting on November 13, agreeing to the sale of the underatking to Messrs. Lefebvre, with a view to its being brought out as a French company, the payment to this company for the English business and the works at Seacombe to be at 250,000f.—The Chairman (Mr. Thomas Chilton) said since the last meeting, in consequence of the opinions then expressed, the board had felt it their duty to try and obtain another offer for the works, in order that they might lay it before the present meeting ; but they had not been able to get any offer. Although the works had been examined by several of the large companies, nothing had resulted.—The confirmation of the resolution was carried on the motion of the Chairman, seconded by Dr. Pearson.

RETURNS OF THE CO OPERATIVE SOCIETIES' FACTORIES.—According to the report of the Wholesale Co-operative Society, for the quarter ending September 26, it appeared in the productive departments the following results have been attained, after interest at the rate of 5 % had been charged and depreciation allowed for :—Crumpsall Biscuit Works, a profit of £1,080. 9s. 5d. on a production of 9,027 cwt. ; Leicester Shoe Works, a profit of £1,421. 19s. 3d. on a production of £59,937. ; Heckmondwike Shoe Works, a loss of £137. 17s. 5d. on a production of £12,504. ; Irlam Soap Works, a profit of £2,362. 2s. 5d. on a production of £28,616. ; Batley Woollen Mill, a profit of £8. 16s. on a production of £6,140 ; Leeds Clothing Factory, a profit of £248. 13s. on a production of £7,514. ; Cabinet Factory (Lower Broughton), a loss of £551. 3s. 6d. on a production of £2,919. ; Clothing Factory (Lower Broughton), a profit of £197. 18s. 9d. on a production of £5,019. ; Dunston Flour Mill, a profit of £515. 14s. 4d. on a production of £107,768. ; Hartlepool Lard Factory, a loss of £1,742. 12s. 10d. on a production of £8,338. ; Middleton Preserve Works, a profit of £751. 19s. 9d. on a production of £18,032. ; and the printing department, a profit of £264. 17s. 4d. on a production of £3,887. The committee report that, in accordance with the authority given them at the last meeting to erect six creameries in England, they have purchased a plot of land at Banbury (Oxfordshire), and hope by next spring to be in a position to commence butter-making.

MESSRS. BLACKWELL AND CO.—We are informed that Mr. George G. Blackwell, jun., has severed his connection with Messrs. G. G. Blackwell, Sons and Co., The Albany, Liverpool, and 4, St. Mary Axe, London, and has commenced business on his own account at Leadenhall House, London, E.C.

SOCIETY OF CHEMICAL INDUSTRY: *Nottingham Section.*—A meeting of this section will be held on Wednesday, December 16th, at 7.30 p.m., at the Midland Hotel, Derby. The papers to be read are:—"Some Properties of certain Metallic Phosphates," by R. M. Caven, B Sc, and Alfred Hill; "The Filtration of Sewage through Coke Breeze," by S. F. Burford, F.C.S., and Thomas Reader Smith, Assoc. M. Inst. C E.

UNHEALTHY OCCUPATIONS.—The Home Secretary certifies that the process of *vulcanising india rubber* by means of bisulphide of carbon, and the processes incidental thereto, are dangerous or injurious to health. The Chief Inspector of Factories may, consequently, serve on the occupier of the factory or workshops a notice in writing either proposing such special rules or requiring the adoption of such special measures as appear to be reasonably practicable and meet the necessities of the case.

ELECTROLYTIC ALKALI AND BLEACH.—At the monthly meeting of the Northern Society of Electrical Engineers, held on Monday evening, at the Palatine Hotel, Manchester—Mr. W. P. J. Fawcus presiding, an address was given by Mr. Bertram Blount, F.I C., on "The manufacture of alkali and bleach by chemical and electrolytical methods." In dealing with the comparative amounts of fuel required for the manufacture of caustic soda by chemical and electrolytical methods, Mr. Blount stated that the total consumption of fuel for the production of one ton of caustic soda and its equivalent amount of chlorine by chemical means rises to 5'4 tons; similarly for one ton of sodium carbonate and its equivalent of chlorine about four tons of fuel will be required. These figures are to be compared with the corresponding values 4·2 and 3 3 tons for the same products prepared electrolytically.

THE ANGLO-SICILIAN SULPHUR CO.—We have on good authority the following particulars about the progress of this company, which confirm our statements in the *Journal* of Nov. 21st. It appears that last month over 40% of all the sulphur mined in Sicily was produced by mines that are independent of the above named company. Already the Sicilians are beginning to wonder how long it can last, even supposing a big dividend can be announced on the strength of the high prices which for the moment are being obtained. Such inflated figures cannot be maintained in the face of the steadily increasing use of pyrites. The Sicilians are said to state that this company will ruin the sulphur trade—their staple industry—and in consequence are desirous of seeing it dissolved, in spite of the fact that it was favoured by the Italian Government. It is not the first time, however, that the people and the Government have held different opinions on such matters.

THE BUDAPEST EXHIBITION OF 1896. We have received the official report of Dr. Leo. Liberman on the eighteenth section of this exhibition, which closed on October 15th, this section having been devoted to Chemical Industries. There were 114 exhibits in this section, many of which where of great interest. Dr. Lieberman has given a very useful historical review of the various industries in his introduction to the classified list of exhibits. Though the latest statistics available are now some years old, since the publication of which considerable advances have been made, still the following figures afford a fair index to the number and extent of the industries engaged in in Austro-Hungary:—Albumen factories 1; Asphalts 7; Tanner's products 9; Bone Ash and Bone Black 7; Cellulose 3; Antimony Refining 1; Wood Pulp 4; Wood Creosoting 1; Colours 7; Colours and Starch 1; Soap and Candles 534; Matches 19; Potash 4. Collectively these various works employ 2,014 workpeople.

MESSRS. G. KYNOCH AND COMPANY.—At a meeting of the directors of G. Kynoch and Company, Limited, held on Monday, a dividend at the rate of 3¼% on the preference and ordinary shares of the company, respectively, was declared, payable on the 21st inst. This dividend on the preference shares will cause the total dividends on the preference shares to amount, in the aggregate, to 100%, and will thus abolish the distinction between the two classes of shares, which will henceforward rank *pari passu*. At the same meeting, Mr. A. T. Cocking, the general manager, resigned that post, and was elected to a seat on the board. Mr. Cocking will continue to devote his whole time to the company's affairs, residing near London, with special charge of the Thames and Arklow Factories. Mr. B. E. Dickinson, lately manager of one of the works of Messrs. John Brown and Co., Limited, Sheffield, was appointed manager of the works at Birmingham; the commercial management of the company being placed in the hands of the secretary, Mr. Frank Huxham. Mr. Samuel Pope, lately manager of one of the works of the United Alkali Company, Limited, was appointed manager of the new Glycerine, Candle and Soap Works at Witton, near Birmingham, which the Kynoch Company will start early in the coming year.

Obituary.—We much regret having to announce the death of M Alfred Nobel, the Swedish engineer and chemist, who died on Wedne day at San Remo. He was the first to recognise the value of nitr glycerine, which he introduced as a blasting agent for industrial pu poses, founding the well-known Nobels Explosives Co., Ltd.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are weaker and quiet at the decline, 90's standing at 3s. the end of the month and 50/90's 2s. 6d. prompt. Other produ are steady, particularly carbolic acids, but there are no alteration prices. Solvent naphtha is moving freely at 1s. 8d. Pitch, d Anthracene is rather weaker perhaps. Sulphate of Ammonia has be flagging, and prices have sunk lower again. At the close, however, t market is no worse, and is thought by some of the more hopeful on to be slightly steadier. Such fluctuations, however, are too freque now to be depended on or taken as trustworthy indications. T actual amount of business passing is the only gauge and then oft misleading at the best. Prices are:—London outside makes £7. 1 to £7. 12s. 6d., Liverpool £7. 8s. 9d., Hull £7. 7s. 6d., Le £7 6s. 3d.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business continues fairly brisk, and though th is no improvement in values as a whole the current quotations sta firm. Caustic soda is steady at prices which have been held now some weeks past, viz.:—Liverpool, f.o.b. 77%, £9.; 74%, £8.; 70 £7. 2s. 6d.; 60%, £6. 2s. 6d. nett per ton, 10-ton lots. Alk 58%, bags f.o.r., £3. 5s. to £3. 7s. 6d. per ton, with only moder demand for present delivery, and for forward delivery there is o little business doing. Soda crystals and bicarbonate unaltered. Bleachi powder is in better general demand and price firm at £6. 10s. f softwoods, £6. 15s. hardwoods f.o.b. Chlorates have been rath firmer, and quoted higher for early deliveries, potash at 4d. to 4¼ Soda at 5d. per lb., but for forward contracts values are witho change. Recovered sulphur steady at £4. 12s. 6d. to £4. 15s. f.o Sulphate of copper firm at £17. 10s. to £17. 15s. f.o.b. Brow acetate of lime firm at £4. 5s to £4. 10s. c.i.f. Grey acetate qu Acetic acid and acetates generally are unaltered in value, but w rather a firmer tendency. For potash, caustic and carbonate, there a continued good enquiry and prices are firm. White powder arsenic scarce at £24. f.o.r. Aniline oil and salt are slightly lowe Carbolic acids are firm in price and in good request. Sulphocyanid are unchanged in value, and there is only a moderate deman Prussiate of potash slightly lower at 5¼d. to 5½d. Demand general for chemicals is quiet.

THE METAL MARKETS.

LONDON, WEDNESDAY.—Pig iron: Scotch warrants closed a 47s. 10½d., Middlesbrough 39s. 11½d. cash, and hematite 52 Copper, firm: Chili bars, G. O. B.'s and G. M. B's., closed a £48. 6s. 3d. to £48. 11s. 3d. cash, and £48. 18s. 9d. to £49 3s 9 three months. Tin, easier: Straits closed at £57. 18s. 9d. t £58. 8s. 9d. cash, and £58. 16s. 3d. to £59. 6s. 3d. three month Australian, £59. 15s.; English ingots, £62. 5s. Lead, dull: Spanish £11. 10s.; English, £11. 12s. 6d. Silesian spelter, ordinary £17. 12s. 6d. to £17. 15s. Nickel, 1s. 2½d. Antimony, £3 Quicksilver: First hands, £6. 12s. 6d.; second hands, £6. 10 *Copper shares*, quiet: Cape, 2½ to 2⅝; Copiapo, 1¾ to 1⅞ Libiola, 1⅛ to 1⅛; Mason and Barry, 3¼ to 3⅜; Rio Tinto 24⅜ to 24½; Tharsis, 5⅞ to 6⅛.

GLASGOW, WEDNESDAY.—Market a shade firmer, with a moderate business. Scotch done at 47s. 10½d., 48s. 3d., and 48s. 2½d. m month; buyers, 47s. 10½d. cash; sellers, 47s. 11d. Cleveland dun at 39s. 11d. to 40s. cash; buyers, 39s. 11½d. cash; sellers, 40 Cumberland hematite done at 50s. 1d. and 50s. 1¼d. cash; buyers 50s. cash; sellers, 50s. 1d. Middlesbrough hematite done at 48s. 2d cash; buyers, 48s. 1½d. cash; sellers, 48s. 2d. cash.

LIVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

OILS.—Palm oil is rather better as regards the outlook, though s far there is no business to report, and the demand is quiet. Olive oil tinues steady, with a fairly good inquiry. Linseed shows no change Liverpool makes in export casks still standing at 16s. 3d. to 17s. 6d per cwt., at which they are now held. Cottonseed has threatened t fall, and prices have again done so, the quotations for Liverpool refine

merican now being 15s. 9d. to 16s. 3d. per cwt., and 17s 9d. vt. respectively. Castor oil is, if anything, a little steadier, but up to now remain 3¾d. for good seconds Calcutta, and 3½d. for first Pressure French. There is no alteration to record in . Resin is able to account for a fairly good business on spot at tes, holders being inexorable. Spirits of turpentine are stronger, here is fairly well doing at 21s. to 21s. 3d. per cwt. Petroleum is with American offering at 6¾d. to 7¾d., and Russian refined at per gallon.

LOURS.—Prices are steady, and practically without change, s: Oxfordshire, common, £10., medium, £12., best, £15. rshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. lead unchanged. Venetian red, £6. to £10. Cobalt: Pre- oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

REPORT ON MANURE MATERIAL.

have again to report a quieter market without any material e in values. The easier freight market has enabled shippers of hate rock to offer more freely for 1897 steamer shipment, but d Kingdom buyers do not seem to be at all influenced by the market. On the Continent, however, buyers are taking tage, and business is reported at a slight concession upon recent tions. The quotation for 75/80% Florida rock remains 6d per c.i.f. to good United Kingdom ports. South Carolina River nd 58/63% Algerian are quoted 5¼d. per unit, in full cargoes, o good United Kingdom ports, but this price would probably be d a fraction in order to induce business There is nothing ted in River Plate bones, and at the moment there are no cargoes g. Crushed Kurrachee bones are quoted £4. per ton for nber-January steamer shipment, without finding buyers. Bombay meal is slightly easier, and may now be had on spot or near at at £3. 17s. 6d. per ton, ex-quay. Nitrate of soda is steady at ½d. per cwt. for ordinary quality, and 8s. for fine quality, on Due cargoes are worth fully 7s. 9d. per cwt.

ULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

LS.—This market continues to establish records in the prices of and linseed, this week in both articles values never before have so low, and future prospects appear to hold out no inducement y decisive improvement. During the week the imports of cotton- ave been 4,556 tons from Alexandria, and this week cotton oil in the lowest price ever known, viz., 13s 1½d. per cwt., naked nd 13s 6d. December-April. The demand from home consumers ues of a very meagre description owing to the low price of other stock. Exports are: Antwerp 25 tons, Amsterdam 74 tons, iania 2 tons, Constantinople 6 tons, Fiume 4 tons, Gothenburg , Hamburg 19 tons, Rotterdam 32 tons, Rouen 17 tons, Stock- 13 tons, Königsberg 71 tons, making altogether 211 tons, st 242 tons same week a year ago. During the week the imports seed have amounted to 8,948 quarters, and the record price of d oil is 14s. 3d. per cwt., naked spot, 15s. first four months, 5s. 6d. May-August. Boiled and refined ditto, £1. to £1 10s. on extra. Barrels 30s., and ordinary casks £1. per ton extra. export for the week has been 46 tons, against 47 ton same a year ago. Olive oil firm and unchanged. Castor oil, from to 4d. per lb. Bone grease easier, £16. 5s. per ton. Turpentine nged. Oleines quoted easier all round. Olive oil soap (Italian) Fatty acids, £16. 15s. per ton., c.i.f. Yorkshire Brown e: Dearer and scarce, £9. per ton.

KES.—Linseed cakes quiet; 95% pure, £6. 5s. Oilcakes, s. 6d, foreign nominal being still relatively dearer than Hull s, as they have been all the summer. Cotton cakes are in thy with all kinds of feed, cheaper; best makes, spot, £4 5s., a e of 3s. 9d. to 5s. on the week. Next week's delivery has been £4.; December-April, £3 15s to £3 12s. 6d. There are reports ers at less. Rape cakes unchanged.

INTS.—With this month the demand practically ceases for the consequently makers are quiet, and expect to be. Prices are nged.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

phate of ammonia is weaker again in the Scotch market, and are rumours of very low prices. One transaction is said to have done in England at £7. 5s. f.o.b. Leith, but this is not quite a nty, though the general feeling denotes further falling from latest authenticated figures. One or two of the makers profess to be holding out for £7. 10s., but the probability is that the very firmest, even, would be unable to withstand the temptation of an offer at something less than that. It is certainly procurable at £7. 7s. 6d. Forward dealing a blank. In the ordinary market sulphur is strong because still scarce, and sulphate of copper is dearer and firm; but with these exceptions there is little but lassitude to be encountered, which is all the more accentuated by the condition of the Baltic enquiry which is practically extinct for the season; mineral oils and solid paraffins remain quite unchanged.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. 2s. 6d. to £4. 7s. 6d. nett, Tyne; white alkali, 48/52°, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 5s., 60/62° £6. 5s., and cream 60/62° £6., all nett, Liverpool; bleaching powder, £6. 12s. 6d. nett, Tyne; saltcake, 21s.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 3d.; sulphate of ammonia, £7. 6s. 3d. to £7. 8s. 9d. prompt, f.o.b. Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £17. 10s. to £17. 15s. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1 7/8d. per lb.; paraffin wax, 120° semi-refined, 1 15/16d. to 2 1/8d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. Week's imports of sugar at Greenock were nil.

TYNE CHEMICAL REPORT.

TUESDAY.

The chemical trade is unaltered in price or position, and, as usual at this time of the year, the demand is only slow. Soda crystals are still quoted at £2. 2s. 6d. per ton, gross weight, locally. Caustic soda, 76/77%, £9. to £9. 5s. per ton; and 70%, £7. 10s. to £7. 15s. per ton f.o.b. Sulphur scarce at £5. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 15s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. per ton. nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 4½d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, refined crystals, £6. 15s. per ton, nett; do, 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt unchanged at 9s. per ton, f.o.b. Tees. Demand is steady.

COALS.—Trade is rather better, and there is a stronger demand for steam coals. The demand for gas coals is also very strong as usual at this season. Coke continues firm. To-day's prices are:—Best Northumbrian steam, 7s. 6d. to 7s. 9d. per ton; second qualities, 6s. 6d. to 6s. 9d. per ton; small steam, 3s. 9d. to 4s. per ton. Bunker coals, 6s 6d. to 7s. per ton. Gas coals, 6s. 9d. to 7s. per ton. Coke, 14s. to 15s. per ton.

New Companies.

James MacNeill and Son, Ltd.—CAPITAL £3,000., in shares of £1. each. This company has been formed to acquire and carry on the business of colour and chemical merchants and manufacturers, at St. Enoch Works, Barrowfield, Glasgow.

Park Bone Works Co., Ltd.—CAPITAL £2,400., in shares of £1. each. This company has been formed to acquire the Park Bone Works at Leigh, Lancashire, and to carry on the business of manufacturing chemists, bone size and bone manufacturers.

Saxby's White Lead Syndicate, Ltd.—CAPITAL £7,000., in shares of £1 each. This company has been formed to acquire the business of white lead manufacturers now carried on by J. Saxby, sen., and others, and to trade as manufacturers of red and white lead, paint and colour grinders, varnish manufacturers, and drysalters. The subscribers to the memorandum of association are:—J. Saxby, sen., Albert House, Kilburn, gentleman; J. Haylor, 33, Oxford-road, Kilburn, collector; H. G. Percival, Hythe-road, Willesden, founder; R. Haylor, 8, Chichester-road, Kilburn, mariner; B. Haylor, 35, Oxford-road, Kilburn, engineer; J. H. Haylor, 33, Oxford-road, Kilburn, collector; J. D. Haylor, 33, Oxford-road, Kilburn, electrician.

Dalmeny Oil Co., Ltd.—CAPITAL £64,800., in 2,700 preference shares of £7. and 5,400 ordinary shares of £8 10s. each. This company has been formed to acquire by purchase, lease or otherwise, and work coal, shale, and other minerals. The subscribers to the memorandum of association are:—G. Roberts, 2, Coates Gardens, Edinburgh, builder; A. B. Murdock, 140, Princes-street, Edinburgh, W.S; G. R. Glendinning, Hatton Mains, Wilkieston, estate agent; K. Mathieson, 58, Morningside Drive, Edinburgh, railway contractor; J. Jones, Dalmeny, Linlithgow, manager in oilworks; W. Drummond, 21, Charlotte Square, Edinburgh, S.S.C.; Martha E. Mathieson, 58, Morningside Drive, Edinburgh, spinster.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending November 28th.

Acetic Acid—
Holland, 46 pks. Little & Johnston
Acetone—
Holland, 8 cks. T. H. Lee
" 1 Phillipps & Graves
Alkali—
N. S. Wales, 25 c. L. & I. D. Jt. Co
Alum—
Holland, 100 pks. Ohlenschlager Brs.
Antimony Ore—
Tampico, 200 t. Union Lighterage Co., Ld.
Asbestos—
Germany, £100 Craven & Co
" 16 T. H. Lee
Barytes—
Holland, 5 cks. G. Rahn & Co.
Belgium, 88 A. Zumbeck & Co.
" 40 J. L. Lyon & Co.
" 187 37 brls. W. Harrison & Co.
Bleaching Powder—
Holland, 200 c. J. M. Steel & Co.
Bone Meal—
E. Indies, 80 t. A. Hunter & Co.
Boracic Acid—
Italy, 8 pks. Nich.'s Wvs.Co.
Caoutchouc—
Germany, 2 c. Carter, Paterson & Co.
" 6 Anderson, Weber & Co.
" 45 Wallace Brs.
" 42 S. Figgis & Co.
" 1 Clarke & Smith
" 51 Lewis & Peat
Zanzibar, 278 L. & I. D. Jt. Co.
" 12 S. Figgis & Co.
" 30 Forbes, Forbes & Co.
Penang, 531 E. Boustead & Co.
Straits, 40 Prop. Bull Wf.
Castor Oil—
Italy, 50 cs. C. Windschuegl & Co.
France, 28 brls. J. Greig
Italy, 30 City Coml. Whf., Ld.
" 50 Nicholson's Whvs., Ld.
" 5 French Flint Glass Bottle Co.
Caustic Potash—
Canada, 20 brls. Charles & Fox
France, 240 c. W. E. Cole
" 46 drs. Phillipps & Graves
Caustic Soda—
France, 86 drs. W. E. Cole
Chemicals *(otherwise undescribed)*
Holland, £64 J. Barber & Co.
" 343 T. H. Lee
Germany, 15 Petri Brs.
U.States, 2,750 L. & I. D. Jt. Co.
Belgium, 23 O. Scholtig
U. States, 530 F. Parker
" 30 R. Thompson
Holland, 25 Hernu, Peron & Co.
Germany, 7 Phillipps & Graves
Belgium, 340 Société John Cockerill
Holland, 60 G. Rahn & Co.
France, 21 Mory & Co.
Germany, 137 T. H. Lee
360 A. & M. Zimmermann
Cobalt—
N. S. W., 1,594 bgs. C. H. Gore
Cobalt Ore—
Australia, 80 t. C. H. Gore
Cream of Tartar—
France, 10 cks. B. & F. Wf. Co.
Holland, 4 Kirkpatrick & Co.
Italy, 40 Howard & Sons
Cresoline—
U. States, £175 Lunham & Moore
Dextrine—
Germany, 150 bgs. J. Barber & Co.
" 10 H. Lambert
Dyestuffs—
Annatto
Ceylon, 40 cs. Eastwood & Holt
Anthracene
Holland, 78 cks. Burt, Boulton & Co.
Argols
Italy, 604 pks. Thames S. T. & L. Co.
Cochineal
Canaries, 5 pks. Patry & Pasteur
" 53 Knowles & Foster
" 5 bgs. J. W. Borland
" 10 W. M. Smith & Sons
Extracts
France, 30 cks. Union L.'Co.
" 35 drs. Carey & Sons
Germany, 205 bgs. Hoare, Wilson & Co.
" 40 cs. H. Johnson & Sons
Gambier
Holland, 135 bgs. S. Figgis & Co.
Singapore, 452 bls. L. & I. D. Jt. Co.
" 456 Brown & Elmslie
" 452 A. J. Luke & Co.
" 436 bgs. G. R. Hader
Indigo
E. Indies, 25 chts. J. Hatton Hall & Co.
" 12 Walker, Munsie & Co.
" 7 L. & I. D. Jt. Co.
" 4 Park, Macfadyen & Co.
" 4 Arbuthnot, Latham & Co.
Shumac
Italy, 110 pks. Clark, Gray & Co.
France, 100 bls. R. Warner & Co.
Italy, 150 200 bgs. H. Johnson & Sons
" 800 2,980 J. Kitchin
" 90 Hicks, Nash & Co.
Tanners' Bark
Natal, 100 t. Boutcher, Mortimore & Co.
Sydney, 36 Dyster, Nalder & Co.
Holland, 5½ T. H. Lee
Natal, 35 A. & W. Nesbitt
" 30 Flack, Chandler & Co.
Valonia
A. Turkey, 59 t. A. & W. Nesbitt
Italy, 1 J. D. Pappaelia
" 11 Hore & Scrivener
Farina—
Italy, 921 cs. C. Tennant, Sons & Co.
France, 3 Hernu, Peron & Co.
Germany, 20 bgs. Bennett S. S. Co.
Belgium, 50 T. H. Lee
Germany, 20 "
" 250 R. Bennett & Co.
Holland, 200 J. Barber & Co.
" 50 Dunlop Brs. & Co.
Glucose—
Germany, 22 pks. 184 c. J. Knill & Co.
" 25 198 c. R. G. Hall & Co.
Germany, 150 876 Deering & Robottom
" 400 400 Robinson, Son & Co.
Germany, 100 100 J. Barber & Co.
Holland, 40 40 "
Glue—
Germany, £22 H. Lambert
Belgium, 240 J. Barber & Co.
Holland, 25 Phillipps & Graves
" 38 G. Rahn & Co.
Germany, 50 Herrmann, Keller, & Co.
France, 152 T. M. Duche & Sons
" 741 Burnett Brs. & Sons
Germany, 40 Phillipps & Graves
Guano—
France, 400 t. Anglo-Contl G. Wks.
Infusorial Earth—
Holland, £25 J. Waddell & Sons
Lamp Black—
U. States, 100 hds. J. Melvin
Lead Acetate—
Germany, 24 cks. F. Boehm
Litharge—
Germany, 25 cks. Petri Brs.
Holland, 55 Spies Brs. & Co.
Manure—
N.S.W., 5 t. G. S. Yuill & Co.
Germany, 50 F. W. Berk & Co., Ld.
Methyl Alcohol—
France, 20 cks. A. H. Wintergill
Mica—
Calcutta, 77 cs. E. Davis & Co.
" 12 L. & I. D. Jt. Co.
Ceylon, £740 E. Davis & Co.
Canada, 35 H. & G. Dutfield
Molasses—
U. States, 500 cks. 3,043 c. Nearcomb Ltge. Co.
Belgium, 38 660 "
U. States, 100 600 Bellamy & Co.
Naphtha—
Holland, 43 brls. Burt, Boulton, & Co.
Ochre—
France, 9 pks. Beck & Pollitzer
Holland, 25 6 cs. Phillipps & Graves
Phosphate Rock—
Belgium, 170 t. D. de Pass & Co.
" 10 Chemical Works
Algeria, 1,290 Lawes Chemical Manure Co.
Pitch—
U. States, 15 pks. Taylor Brs.
Holland, 28 brls. H. Hill & Sons
Plumbago—
Germany, 5 cks. T. H. Lee
" 80 B. Gallaway
" 88 cs. E. & T. Pink
Ceylon, 208 cks. Union L. Co.
" 32 brls. R. G. Hall & Co.
" 35 Doulton & Co.
" 366 J. Thredder, Son & Co.
" 42 pks. Anderson, Weber, & Co.
" 204 cks. Williams, Torrey, & Co.
Potassium Carbonate—
France, 95 cs. Petri Brs.
" 144 J. A. Reid
" 100 Carey & Sons
Potassium Chloride—
Holland, 16 cks. H. Johnson & Sons
Potassium Cyanide—
Holland, 5 cs. F. Boehm
Potassium Sulphate—
E. Indies, 186 bgs. G. H. Wilson & Son
Belgium, 150 Petri Brs.
Pyrites—
Pomaron, 1,130 t. C. L. Vasey & Co.
Spain, 1,720 Naylor, Benzon, & Co.
" 1,309 Anderson, Anderson, & Co.
Rosin Oil—
Germany, 7 brls. H. Hirt
Holland, 5 cks. G. Rahn & Co.
Saltpetre—
Germany, 20 cks. L. & I. D. Jt. Co.
E. Indies, 2,663 bgs. Lucas & Spencer's Wf.
" 546 Perkins & Hunt
Soda—
Holland, 100 c. R. W. Greeff & Co.
Sodium (Metal)—
Belgium, 37 cs. A. C. Lloyd
Sodium Acetate—
France, 36 cks. J. Harrison
" 15 H. Lewis
Sodium Prussiate—
Belgium, 19 brls. D. C. Thomas & Son
Sodium Sulphate—
Holland, 30 cks. Deering & Robottom
Starch—
France, 640 cs. W. E. Cole
" 200 Prpts. Dowgate Dk.
Holland, 270 Phillipps & Graves
Belgium, 280 T. H. Lee
" 304 F. Clayden & Co.
" 230 T. Ronaldson & Co.
Holland, 871 Little & Johnson
Belgium, 440 E. & T. Pink
" 188 Fellows, Morton, & Co.
U. States, 6 brls. Pickford & Co.
Belgium, 7 cs. Bayerham & Co.
" 160 J. Harrison
Germany, 3 bgs. R. G. Hall & Co.
Stearine—
France, 120 bgs. H. Wallace & Trust
Holland, 51 bls. J. Owen
" 63 bgs. H. Hill & Sons
Belgium, 2 cks. T. H. Lee
France, 250 bgs. G. Bone & Co.
" 150 H. Hill & Sons
Sulphur—
Italy, 300 t. W. C. Burns & Co.
" 300 Brandrams Brs. & Co.
" 5 Taylor Brs.
" 15 J. Kinahin, Ltd.
Talc—
E. Indies, £524 A. B. Curtis & Co.
France, 5 Burnett Brs. & Sons
Tartaric Acid—
Holland, 33 pks. Kirkpatrick & Co.
" 12 E. & F. Wf. Co.
Ultramarine—
Holland, 2 cks. Taylor Brs.
" 2 cs. J. Barber & Co.
Varnish—
Germany, 9 pks. L. & I. D. Jt. Co.
" 7 Taylor Brs.

rdigris—
rance, 3 cks. B. & F. Wf. Co.
ite Lead—
ermany, 23 cks. W. A. Rose & Co.
,, 19 N. J. Fenner & Co.
,, 19 G. Farmiloe & Sons
,, 10 J. Kitchin, Ltd.
olland, 46 Spies Brs. & Co.
,, 20 A. & M. Zimmermann
elgium, 42 pks. 3 brls. Leach & Co.
ermany, 90 cks. Steinhoff, Sons, & Co.
elgium, 16 J. L. Lyon & Co.
od Pulp—
weden, 340 pks. Henderson, Craig, & Co.
,, 3,062 A. Werthein & Co.
,, 400 E. J. & W. Goldsmith
,, 1,200 Tough & Henderson
elgium, 1,389 E. J. & W. Goldsmith
orway, 867 ,,
,, 1,200 A. Werthein & Co.
c White—
olland, 65 cks. Spies Brs. & Co.

LIVERPOOL.

Week ending November 26th.

enic—
amburg, 20 cks.
estos—
noa, 4 cs.
e Ash—
mpana, 641 bgs.
o Grande do Sul, 245 t.
acic Acid—
ghorn, 100 cks.
ax—
lveston, 2,425 sks.
tor Oil—
arseilles, 28 brls. Evans, Sons, & Co.
,, 384 40 cs.
lcutta, 255 cs. Ralli Brs.
micals—
arseilles, 1 brl. Bryce & Rumpff
ic Acid—
ssina, 8 cks.
Oil—
John's, N'fld., 530 cks. C. T. Bowring & Co.
,, 824 Job Brs.
onseed Oil—
w York, 200 brls.
am of Tartar—
orto, 5 cks Band Brs.
rseilles, 1
rcelona, 2
d Blood—
mpana, 308 bgs.
stuffs—
ochineal
Palmas, 16 bgs. Swanston & Co.
,, 10 Sperling & Williams
,, 20 Kolp, Kulman & Co.
,, 18
xtracts
w York, 16 brls. 86 pks.
ustic
mpico 4,075 ps. W. H. Thompson & Co.
on, 960 Widow Duranty & Son
ambier
gapore, 2,262 bgs.
ndigo
cados River, 33 cs. Royal Niger Co.
lyrabolams
mbay, 8,505 bgs.
,, 3,411 D. Sassoon & Co
affron
in, 1 cs.
encia, 1
humac
ermo, 50 bgs. J. Kitchin, Ld.
,, 2,486
alonia
ras, 1 bg.
na—
me, 100 bgs. C. J. Vander Veen & Bro.
275
ose—
w York, 200 brls. T. M. Duche & Sons
—
on, 8 cks.

Rotterdam, 4 cs.
Rouen, 52 1 Co-op. W'sale Society, Ld.
Fiume, 95 pks.
New York, 50 cs.
Iron Oxide—
Montreal, 25 brls. 30 kgs. Allan Brs. & Co.
Lactic Acid—
Boston, 2 kgs. 8 brls. J. Taylor
Lamp Black—
Newport News, 186 brls. W. Candery & Co.
Manganese—
Havre, 374 brls Co.-op. W'sale Society, Ld.
Mineral White—
Fiume, 285 bgs.
Naphtha—
Philadelphia, 9,250 brls.
Ochre—
Marseilles, 92 brls.
Alicante, 300 bgs.
Rouen, 108 cks. Co.-op. W'sale Society, Ld.
Montreal, 1 Goodlass, Wall & Co.
Paint—
Boston, 7 cs. Walsh, Lovatt & Co.
Montreal, 3 kgs. Goodlass, Wall & Co.
Paraffin Scale—
New York, 528 brls. Thompson & Bedford
Phosphate Rock—
Brunswick, Ga., 1,698 t.
Pitch—
Bordeaux, 50 cks.
Marseilles, 49
Potashes—
Montreal, 50 brls.
Pumice Stone—
Montreal, 1 brl. Goodlass, Wall & Co.
Pyrites—
Huelva, 3,295 t. Matheson & Co.
Rosin—
Carrabello (Florida), 1,966 brls.
Baltimore, 500
Wilmington, 500
Salt—
Colon, 1 ck.
Saltpetre—
Hamburg, 135 kgs. 4 cks.
Calcutta, 810 bgs. Ralli Brs.
Soap—
Marseilles, 628 cs. 395 bxs.
Leghorn, 500 Weaver & Sterry
Baltimore, 345 brls.
Naples, 352
Bari, 269
Soapstone—
Bordeaux, 100 bgs. G. G. Blackwell, Sons & Co.
Genoa, 200 W. Harrison & Co.
Starch—
New York, 400 bgs. T. M. Duche & Sons
,, 200 sks.
Hamburg, 62 cs
Stearine—
Boston, 200 brls. Colby & Co.
Sulphur—
Catania, 100 t. 570 bgs.
Tallow—
New York, 83 brls. Colby & Co.
Boston, 275 25 bds.
,, 147
Campana, 590 cks.
Tar—
Trieste, 1 brl.
Tartar—
Bordeaux, 32 cks.
Naples, 3
Tartaric Acid—
Paris, 16 brls. Seine & Mersey S. S. Co.
Treacle—
Rotterdam, 2 cks.
Boston, 40 brls. Maple Syrup Co.
Ultramarine—
Rotterdam, 4 cks.
Hamburg, 4
Varnish—
New York, 6 brls W. A. Warren
Waste Salt—
Hamburg, 2,016 bgs. & qty.
White Lead—
Trieste, 20 brls. Mander Brs.
Wood Pulp—
Skien, 4,940 bls. H. Tyrer & Co.
Oporto, 424
New York, 238 bdls. Spicer Brs., Ld.
Boston, 127 48 crts. ,,

MANCHESTER.

Week ending November 28th.

Acetic Acid—
Rotterdam, 20 blns.
Alizarine—
Rotterdam, 29 cks. 1 cs. 14 brls.
Alumina Sulphate—
Rotterdam, 21 cks.
Aniline Colours—
Rotterdam, 27 cks. 10 brls.
Antimony Salts—
Rotterdam, 5 cks.
Bone Ash—
Rio Grande do Sul, 245 t.
Chemicals *(otherwise undescribed)*
Rotterdam, 21 cks. 2 cs.
Colours—
Boulogne, 4 cks.
Rotterdam, 13 28 cs 18 bxs. 106 brls.
Farina—
Stettin, 4,605 bgs Stott, Coker, & Co.
,, 2,200 Browne, Geveke, & Co.
,, 1,020
Hamburg, 50
Glucose—
Stettin, 1,008 bgs. 160 cks.
Glue—
Rotterdam, 45 bgs.
Limestone—
Antwerp, 3 crts.
Mineral White—
Bordeaux, 237 bgs. J. & P. Hutchison
Naphthol—
Rotterdam, 4 cks.
Ochre—
Treport, 33 cks.
Potash—
Treport, 17 cks.
Potassium Sulphate—
Rotterdam, 100 cks.
Starch—
Rotterdam, 40 cs.
Ghent, 40
Stearine—
Antwerp 13 bgs.
Sulphur Chloride—
Rotterdam, 17 crbys.
Tar Waste—
Rotterdam, 17 cks.
Tartar—
Bordeaux, 3 cks. J. & P. Hutchison
Rotterdam, 26 kgs.
Tartaric Acid—
Rotterdam, 6 cks. 15 pks.
Ultramarine—
Rotterdam, 20 cs.
Waste Salt—
Hamburg, qty.
Wood Pulp—
Stettin, 350 bdls.
Zinc Ashes—
Antwerp, 15 cks.
Stettin, 30
Zinc Chloride—
Antwerp, 4 dms. J. T. Fletcher & Co.
Zinc Oxide—
Rotterdam, 50 cks. 50 brls.
Zinc Sulphate—
Rotterdam, 4 brls.
Zinc White—
Rotterdam, 5 cks.

HULL.

Week ending November 28th.

Acetic Acid—
Rotterdam, 35 blns. Hutchinson & Son
Antwerp, 2 cks. Bailey & Leetham
Alum—
Rotterdam, 34 cks. Hutchinson & Son
Aniline Salt—
Rotterdam, 1 brl. W. & C. L. Ringrose
Asbestos—
Reval, 32 bgs. Wilson, Sons, & Co., Ld.
Barytes—
Amsterdam, 48 cks. Hutchinson & Son
Bremen, 30 S. Tudor & Co.
Antwerp, 66 55 bgs. Bailey & Leetham
,, 34 H. F. Pudsey
Rotterdam, 21 Hutchinson & Son
Bone Black—
Hamburg, 110 bgs. Wilson, Sons, & Co., Ld.
Chemicals *(otherwise undescribed)*
St. Petersburg, 1 cs. Wilson, Sons, & Co., Ld.
Bremen, 1 ck. Veltmann & Co.
Dunkirk, 2 55 pks. Wilson, Sons, & Co., Ld.
Antwerp, 10 dms. Wilson, 41 pks. Sons, & Co., Ld.
Cod Oil—
Christiania, 17 brls. Wilson, Sons, & Co., Ld.
Colours—
Hamburg, 8 cs.
Ghent, 20 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 3 W. & C. L. 4 cks. 39 pks Ringrose
Amsterdam, 2 Hutchinson & Son
Antwerp, 5 brls. 44 pks. Wilson, Sons, & Co., Ld.
Riga, 397 cs. ,,
Cottonseed Oil—
Rotterdam, 50 brls. Hutchinson & Son
New York, 750 Wilson, Sons, & Co., Ld.
Cream of Tartar—
Rotterdam, 2 cks. Hutchinson & Son
Dyestuffs—
Alizarine
Rotterdam, 35 cks. W. & C. L.
4 brls. Ringrose
Indigo
Hamburg, 3 cs. Wilson, Sons, & Co., Ld.
Madder
Rotterdam, 1 ck. J. Pyefinch & Co.
Farina—
Harlingen, 200 bgs. W. & C. L. Ringrose
Stettin, 330 Wilson, Sons, & Co., Ld.
Ghent, 12 ,,
Harlingen, 800 Hutchinson & Son
Glucose—
New York, 100 brls.
Glue—
Rouen, 28 cks. Rawson & Robinson
Dunkirk, 144 Wilson, Sons, & Co. Ld.
Limestone—
Antwerp, 9 crts. 2 cs. Wilson, Sons, & Co., Ld.
Mica—
Hamburg, 1 cs. Wilson, Sons, & Co., Ld.
Ochre—
Rouen, 4 cks. Rawson & Robinson
Phosphate—
Ghent, 100 t. Wilson, Sons, & Co., Ld.
Pitch—
Amsterdam, 26 cks. Hutchinson & Son
Potash—
Hamburg, 20 dms. Bailey & Leetham
Potassium Silicate—
Rotterdam, 62 cks. Hutchinson & Son

Saltpetre—
Rotterdam, 4 cks. Hutchinson & Son
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.

Soap—
Hamburg, 1 cs. W. H. Walton
New York, 40 bxs. Wilson, Sons, & Co., Ld.
Rotterdam, 14 cks. "
" 4 cs. W. & C. L. Ringrose

Starch—
Bremen, 1,074 cs. Veltmann & Co.
Ghent, 204 Wilson, Sons, & Co., Ld.
Antwerp, 48 Bailey & Leetham
" 170 Wilson, Sons, & Co., Ld.

Stearine—
Antwerp, 5 bgs. Wilson, Sons, & Co., Ld.

Sulphate of Alum—
Hamburg, 2 cs. Lofthouse & Saltmer

Tallow—
Hamburg, 6 brls. Wilson, Sons, & Co., Ld.
New York, 60 tcs. "

Tar—
Rotterdam, 1 ck. Hutchinson & Son
Stockholm, 10 brls. Wilson, Sons, & Co., Ld.

Treacle—
New York, 1,655 brls. Wilson, Sons, & Co., Ld.

Ultramarine—
Rotterdam, 12 cks. Hutchinson & Son

Varnish—
New York, 27 pks. Wilson, Sons, & Co., Ld.

Waste Salt—
Hamburg, qty. Bailey & Leetham

White Lead—
Rotterdam, 20 cks. Hutchinson & Son

Wood Pulp—
Helsingfors, 551 bls. J. Good & Sons
Hamburg, 116 Bailey & Leetham

GLASGOW.

Week ending December 3rd.

Acetate of Lime—
New York, 260 bgs.

Aniline—
Rotterdam, 10 brls. 3 bxs. J. Rankine & Son

Barium Sulphate—
Antwerp, 823 bgs.

Barytes—
Rotterdam, 120 pks. J. Rankine & Son

Castor Oil—
Marseilles, 289 brls.
Antwerp, 46 cks.

Chemicals (*otherwise unenumerated*)
Hamburg, 1 cs.

Colours—
Antwerp, 5 cs. 1 ck.
Rotterdam, 19 2 brls. 38 pks J. Rankine & Son
Hamburg, 2 4 cks.

Cottonseed Oil—
New York, 60 brls.

Dyestuffs—
Alizarine
Rotterdam, 25 cks. 108 brls. 2 bxs. 5 pks. J. Rankine & Son
Logwood
Jamaica, 618 t. 9c. Mucklow & Co.

Farina—
Delfszyhl, 1,050 bgs.
" 100 J. Rankine & Son

Glucose—
New York, 350 brls 499 bgs.

Glue—
New York, 97 brls.

Iron Oxide—
Montreal, 56 kgs.

Minium—
Rotterdam, 13 cks. J. Rankine & Son

Ochre—
Marseilles, 22 brls.

Phosphorus—
Baltimore, 5 cs.

Pitch—
Amsterdam, 6 cks.
Hamburg, 8 cs.

Potash—
Rotterdam, 34 cks. J. Rankine & Son

Pyrites—
Huelva, 1,800 t. Tharsis Co.

Rosin—
New York, 63 brls.

Salt—
Hamburg, 50 bgs.

Saltpetre—
Hamburg, 45 kgs. 2 cks. 30 bgs

Soap—
New York, 142 brls.

Sodium Sulphate—
Rotterdam, 3 brls. J. Rankine & Son

Starch—
Ghent, 80 cs.

Stearine—
Marseilles, 1 bg.
Rotterdam, 16 cks. J. Rankine & Son

Tartar—
Bordeaux, 15 cks.

Treacle—
Charente, 6 qr.-cks.
New York, 200 pks. 300 brls. Waddell & Bryson
" 50

Varnish—
New York, 1 brl.
Antwerp, 6 cks.

Verdigris—
Bordeaux, 10 cks.

Waste Salt—
Hamburg, 232 cks.

White Lead—
Rotterdam, 107 cks. J. Rankine & Son

Wood Pulp—
Gothenburg, 566 bls.
Gefle, 3,950 Henderson, Craig & Co.
Hamburg, 413
Christiania, 2,722 bls. 153 cs.

Zinc Oxide—
Hamburg, 50 cks.
Rotterdam, 25 J. Rankine & Son

Zinc White—
Rotterdam, 25 cks. J. Rankine & Son

TYNE.

Week ending November 28th.

Alum Earth—
Hamburg, 42 cks. Tyne S. S. Co.

Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co

Barytes—
Hamburg, 500 bgs. Tyne S. S. Co.

Cod Oil—
Bergen, 2 brls.

Colours—
Antwerp, 4 cks. Tyne S. S. Co.

Limestone—
Antwerp, 10 pks. Tyne S. S. Co

Phosphate—
Antwerp, 350 t. Langdale's Chemical M. Co.

Pyrites—
Huelva, 1,674 t. Sulphur & Copper Co.

Sodium Nitrate—
Caleta Buena, 2,162 t.

Starch—
Rotterdam, 100 cs. Tyne S. S. Co.
Antwerp, 2 "

Stearine—
Antwerp, 14 bgs. Tyne S. S. Co

Wood Pulp—
Christiania, 4 cs.
Arendal, 360 bls.
Gothenburg, 365 pks.

Zinc Oxide—
Antwerp, 25 brls. Tyne S. S. Co.

GOOLE.

Week ending November 25th.

Alizarine—
Rotterdam, 112 brls. 1 cs.

Alkali—
Calais, 3 cks.

Alum—
Rotterdam, 60 bgs.

Antimony—
Boulogne, 1 ck.

Barytes—
Antwerp, 100 bgs.

Caoutchouc—
Boulogne, 12 cks.

Chemicals (*otherwise unenumerated*)
Hamburg, 4 cks 10 cs.

Colours—
Hamburg, 3 cs.
Amsterdam, 1 ck. 1 kg.

Dyestuffs (*otherwise unenumerated*)
Rotterdam, 262 cks. 86 cs. 1 bl.
Boulogne, 25 3 13

Extracts—
Hamburg, 100 bgs.

Farina—
Hamburg, 450 bgs.
Delfszyhl, 1,846
Harlingen, 200

Glue—
Hamburg, 40 bgs.
Rotterdam, 90

Madder—
Rotterdam, 2 cks.

Plumbago—
Boulogne, 2 cs.

Potash—
Rotterdam, 22 cks.
Dunkirk, 4
Calais, 23
Antwerp, 27

Pyrites—
Huelva, 634 t.

Saltpetre—
Hamburg, 36 cks.
Rotterdam, 200 bgs.

Soap—
Rotterdam, 4 cs.

Sodium Silicate—
Rotterdam, 1 ck.

Tartaric Acid—
Rotterdam. 2 cks.

Waste Salt—
Hamburg, 87 cks. 450 t.

GRIMSBY.

Week ending November 28th

Caoutchouc—
Hamburg, 2 bxs.
Antwerp, 3 cs.
Rotterdam, 2

Chemicals (*otherwise unenumerated*)
Antwerp, 20 cks.
Hamburg, 1 2 cs.

Colours—
Hamburg, 8 cks. 23 cs. 12 pkgs.
Antwerp, 11 44

Lamp Black—
Rotterdam, 3 cks.

Plumbago—
Hamburg, 28 cks.

Soap—
Malmo, 1 bx.
Rotterdam, 13 cs.

Tallow—
Hamburg, 57 pkgs.

Wood Pulp—
Malmo, 80 bls.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 2nd.

Acids—
Penang, 9 cs. £16
Shanghai, 26 65

Alum—
Salonica, 10 t. 2 c. £57

Ammonia—
Pt. Elizabeth, 16 cs. £22

Ammonium Carbonate—
Hiogo, 6 t. £158
B. Ayres, 1 30
Dunedin, 5 c. 10
Rouen, 5 11 140
Bordeaux, 10 crts. 37

Ammonium Chloride—
Cape Town, 2 t. 15 c. £107
E. London, 10 19
Algoa Bay, 10 19
Auckland, 1 20
Varna, 2 9 81
Salonica, 7 cks. 37
Bussorah, 5 19 197

Ammonium Sulphate—
Rotterdam, 80 t. £600
Dunkirk, 20 150
Antwerp, 50 375
Demerara, 50 9 c. 411
Hamburg, 50 390

Ammonium Nitrate—
Hamburg, 4 cks. £40

Antimony Sulphide—
Boulogne, 12 c. £80

Ammonium Sulphocyanide—
Philadelphia, 1 t. 13 c. £14

Arsenic—
E. London, 10 c. £12

Barium Nitrate—
New York, 3 t. £55

Bisulphite of Lime—
Natal, 2 t. 10 c. £32

Boracic Acid—
Wellington, 8 c. £13
Brussels, 1 t. 2 44

Borax—
Dunedin, 20 kgs. £25

Carbolic Acid—
Rotterdam, 160 dms.
Calcutta, 42
Algoa Bay, 20
Yokohama, 100
Brussels, 11 c.

Caustic Potash—
Napier, 18 c.

Caustic Soda—
Napier, 5 c.
Wanganui, 3 t.
Dunedin, 7
E. London, 5 16
Algoa Bay, 13

cals *(otherwise undes.)*—
s. 3 cs. £20
de, 20 kgs. 94
2 10
Bay, 4 pks. 13 62
y, 7 70
ampton 3 26
urne, 5 t. 290
g, 18 24
rk, 18 792
t, 15 600
1 2 c 50
y, 14 12 850
ntle, 2 10
es, 21 pks. 38
hee, 2 31

de of Gold—
Bay, 1 cs. £21

form—
1 cs. £19

Acid—
g, 1 c. £4
hee, 2 cs. 10
ls, 1 t. 3 122
Bay, 4 24
1 8
2 14
Town, 11 67
15 89
Bay, 4 24
y, 6 22

roducts—
arine
s, 10 cks. £20
2 33
10 503
25 308
aux, 5 129

line Dyes
ta, 1 cs. £25
urne, 5 27
Town, 1 10

line Oil
10 dms. £300
rk, 10 500

line Salts
York. 10 dms. 10 cks. £620

hracene
e. 300 cks £1,600
dorf, 300 1,590

zol
arg, 94 cks. £643
dam, 124 48 cs. 1,339

bsote
York, 500 cks. £240

bsote Salts
306 bgs. £36
9 cks. £181

bane
arg, 3 cks. 1 cs. £38
8 c, 20
5 20

htha
nd, 30 dms. £35

hthaline
port, 15 cks. 86 bgs. £75

h
1,324 t. £2,204
ore, 1,142 bgs. 194
d'
ne, 885 1,700
ort News, 250 cks. 218
rp. 415 765
azen, 500 888
gfors, 600 945
15 3
eld, 524 1,064
136 530 brls 422

idine
2 t. 12 c. 12 cks. £260
rdam, 12 120
gfors, 1,100 brls. £633
ba Bay, 250 dms. 11
y, 10 rnlts. 18
30 cks. 17
burg, 60 42

Salts
zabeth, 5 c. £16
Bay, 6 cs. 16
ol
ne, 60 cks. £180

roducts *(otherwise unles.)*—
ne, 25 brls. £26

of Tartar—
de, 1 t. 5 c. £108
ton, 1 11 7 pks. 126
Town, 2 11
1 91
dam, 1 6 97
din, 15 64
urne, 3 10 208
Bay, 3 10 kgs. 34
ol'e, 1 89

Disinfectants—
Colombo, 12 dms. 2 cs. £10
Foochow, 2 cks. 13
Shanghai. 5 pks. 17
Singapore, 26 86
Cape Town, 140 190
Bombay, 17 21
Berbice, 1 1 12

Dried Blood—
New York, 5 t. 1 c. £516

Manure—
Morlaix, 115 t. £345
Jamaica, 6 9 c. 34
Martinique, 5 10 150
Pt. Elizabeth, 6 cs. 70
Barbadoes, 20 180
Demerara, 330 18 2,658
Jersey, 319 1 1,978

Molybdenite—
Antwerp, 1 t 10 c. £110

Muriatic Acid—
Singapore, 6 t. 12 c. £35

Nitric Acid—
Jersey, 15 carboys £30

Oxalic Acid—
Adelaide, 13 c. £23

Phosphoric Acid—
Demerara, 10 t. £132
Barbadoes, 4 cks. 44
Martinique, 6 9 c. 90

Phosphorus—
Rio de Janeiro, £51

Potash—
B. Ayres, 2 t. 12 c. £45

Potassium Bicarbonate—
Philadelphia, 1 t. 6 c. £33

Potassium Bichromate—
Adelaide, 5 c. £12

Potassium Carbonate—
Adelaide, 13 c. £10

Potassium Chlorate—
Cape Town, 2 t. £79

Potassium Cyanide—
Fremantle, 10 cs. £55
Auckland, 20 205
Cleveland Bay, 11 t. 11 c. 1,048
Algoa Bay, 10 887
Melbourne, 10 52

Potassium Nitrate—
Adelaide, 15 c. £17

Potassium Prussiate—
Yokohama, 1 t. £56
Brussels, 2 cks. 25
Genoa, 15 c. 45
Rotterdam, 5 280
Hamburg, 2 42
Rouen, 1 55
New York, 39 598
Stockholm, 2 26

Salicylic Acid—
Sydney, 6 cs. £25
Adelaide, 1 9

Saltpetre—
B. Ayres, 14 c. £15
Dunedin, 6 7
Santiago, 1 t. 18 42
Lisbon, 1 16 37
Corunna, 18 19
Bahia, 4 5 93
Sydney, 12 11

Sheep Dip—
Lyttelton 250 cs. £625
San Francisco, 3 7
Napier, 6 t 9 c. 200
Punta Arenas, 200 400
B. Ayres, 215 bgs. 1,652 4 742
Melbourne, 100 dms. 21
Cape Town, 550 145
Falkland Isles, 80 26 cks. 280

Soda—
B. Ayres, 5 c. £14

Soda Ash—
Santos, 5 t. 3 c. £30

Soda Crystals—
Adelaide, 4 t. 18 c. £22

Sodium Bicarbonate—
E. London, 5 c £4

Sodium Carbonate—
Fremantle, 10 c. £5

Sodium Prussiate—
Co'ogne, 1 ck. £11

Sodium Silicate—
Napier, 5 t. 12 c £27

Strontium Carbonate—
New York, 6 c £8

Strontium Nitrate—
New York, 8 t. 13 c. £208

Sulphur—
Barbadoes, 1 t. 10 c. £10
Rio de Janeiro, 5

Sulphuric Acid—
E. London, 29 cs. £20
B. Ayres, 15 19
Bombay, 1 t. 5 c. 10

Tartaric Acid—
Calcutta, 2 c. £14
Algoa Bay, 3 12
Adelaide, 2 t. 10 307
Lyttelton, 9 53
Natal, 3 kgs. 17
E. London, 2 10
Kurrachee, 9 cs. 63
Melbourne, 1 10 kgs. 179
Hiogo, 5 29
Bombay, 27 136
Fremantle, 1 124

Tin Crystals—
Barbadoes, 13 cs. £57

LIVERPOOL.

Week ending December 2nd.

Albumen—
Boston, 1 t. 4 c. £22

Alum—
Lisbon, 5 t. 5 c. 1 q. £26
Valparaiso, 14 3 3 67
Sydney, 1 5 7
Melbourne, 3 2 1 14
Varna, 3 13 1 17
Syra, 2 15 13
Alexandretta, 2 17 15
Piræus, 4 20

Ammonia (Liquid)—
Pisco, 6 c. £15

Ammonium Carbonate—
Copenhagen, 19 c. 1 q £29
Genoa, 1 t. 5 55
Riga, 10 14
Colon, 5 9
Odessa, 3 10 87
Paris, 1 8 50

Ammonium Chloride—
Smyrna, 17 c. £27
Beyrout, 16 26
Antwerp, 1 t. 1 42
Piræus, 10 18
Philadelphia, 12 21
Larnaca, 4 7
Barcelona, 2 2 48
Sydney, 1 4 16
Colon, 1 1
Valencia, 30 18 2 q 240
Bilbao 4 3 9
Trieste, 3 100
Patras, 6 10
Vigo, 4 1 8

Ammonium Sulphate—
Ghent, 100 t. £1,100
New York, 50 13 c. 425
Hamburg, 100 900
Gd. Canary, 10 80
Barcelona, 9 15 69
Antwerp, 100 900
Valencia, 29 16 230
Boston, 51 385
Philadelphia, 103 12 852
Palermo, 5 40

Bleaching Powder—
Baltimore, 152 cks.
Bombay, 58 bxs.
Boston, 220
Bremen, 2
B. Ayres, 100 cs. 15 brls.
Genoa, 157
Havana, 6
Havre, 16
Melbourne, 140
Naples, 17
New York, 483
Paris, 36
Pasages, 14
Riga, 20 kgs. 10
Rouen, 81

Boracic Acid—
Antwerp, 2 t. 1 c. 3 q. £65

Borax—
Stockholm, 5 t. 2 q £100
Norrkoping, 1 3 23
Cape Town 5 c. 3 6
Portland, M., 1 10 28
Hamburg, 34 15 3 687
Rotterdam, 11 13 3 237
Venice, 1 12 2 33
Sydney, 2 12 52
Antwerp, 22 11 451
Genoa, 19 3 20
Barcelona, 5 9 3 110

Calcium—
Odessa, 15 t. 3 c. £33
Brisbane, 5 4 16

Calcium Chloride—
B. Ayres, 4 t. 3 c. £14

Carbolic Acid—
Portland, 5 c. £16
Rangoon, 2 6
Rotterdam, 11 t. 4 611
Old Calabar, 20 cs. 90
Boston, 9 19 310
New York, 2 17 2 165
Odessa, 13 2 48
Konigsberg, 7 23
Hamburg, 5 329

Caustic Soda—
Alexandria, 140 dms.
Amsterdam, 10 76 pks.
Ancona, 20
Baltimore, 225
Barcelona, 64
Bari, 121
Bilbao, 30
Bombay, 7
Boston 25 125 brls.
B. Ayres, 75 26 cks.
Calcutta, 40
Cape Town, 11 cs.
Corfu 30
Fiume, 84
Genoa, 368
Hamburg, 33 20 bxs.
Havana, 18
Honolulu, 35
Jaffa, 45
Konigsberg, 18
Lisbon, 37
Malaga, 30
Malta, 14
Maracaibo, 10
Marseilles, 180
Melbourne. 431
Newport News, 10
Messina, 20
Naples, 30
New York, 311 30
Odessa, 180
Pacasmayo, 20
Palermo, 25
Para, 121
Paris, 34
Penang, 90
Pernambuco, 25
Philadelphia, 25
Progresso, 85
Puerto Cabello, 20
Riga, 100
St. Croix, 2
St. John's, N'fld., 50
St. Stephen, 50
Salaverry, 42
San Francisco, 50
Seville, 50
Sydney, 42
Tampico, 83
Tarragona, 30
Venice, 10
Yokohama, 250
Woodstock, 50

Chemicals *(otherwise undescribed)*
Barcelona, 1 t. £29
Bombay, 9 342
San Francisco, 50 16 c. 2 q. 238
Calcutta, 29 4 140
Stettin, 19 27
Konigsberg, 1 28
Odense, 1 28
Gefle, 10 14
Sydney, 15 23
Philadelphia, 13 11 445
Gothenburg, 1 13 54
Amsterdam, 5 9
Punta Arenas, 12 cks. 24 cs. 124

China Clay—
Barcelona, 12 cks.
Boston, 1,737
B. Ayres, 40
Lisbon, 21
Philadelphia, 57 168 bgs.
Portland, M., 100
Riga, 4
Rio de Janeiro, 40
Trieste, 250
Vera Cruz, 35

Citric Acid—
Genoa, 1 t. £117

Coal Products—
Aniline Colours
Barcelona, 2 cks
New York, 4
Portland, M., 2
Aniline Dyes
Barcelona, 1 cs.

Aniline Oil
Barcelona, 8 cks.
Philadelphia, 10 dms.

Aniline Salts
Boston, 18 cs.
Philadelphia, 15
Smyrna, 5 cks.

Creosote Salts
N. Orleans, 150 brls.

Pitch
Rouen, 3 cks. 7 brls.

Tar
Old Calabar, 10 brls.
St. John's, N'fld., 50

Coal Products (*otherwise under.*)—
New York, 53 cks. 2 kgs.

Copper Sulphate—

Havre,		14 c.	2 q.	£12
Bari,	19 t.	7		37
Trieste,	9	19	3	263
Jaffa,	3		1	49
Lisbon,	19	8	3	909
Messina,	2		1	54
Cette,	197	2	3	7,030
Carthagena, N.G.,		1	2	3
Timbo,		6	1	16
Leghorn,	30			470
Antwerp,	55			860
Genoa,	11	11		201
Melbourne,	5			86
Paris,	32		2	513
Odessa,	17	19		289
Marseilles,	10	18		171

Copperas—

Syra,	4 t.			£9
Constantinople,	2	7 c.	2 q.	5

Disinfectants—
Bombay, 2 t. 10 c. 50 kgs. £27

Dried Blood—
St. Nazaire, 10 t. 7 c. 3 c. £62

Guano—
Accra, 10 c. £3

Hydrochloric Acid—
San Juan, 1 t. 2 c. £16

Lime—

Montserrat,	2 t.	8 c.		£6
Lagos	16	5	2 q.	41
Cape Town,	7	19	3	18
Little Popo,	6	10		18

Magnesia—
Alicante, 25 cs.
Havre, 69
New York, 10

Potassium Chloride—
Bombay, 25 t. 6 c. £64

Manure—

Las Palmas,	63 t.	5 c.	£245
Gd. Canary,	2		6
Morlaix,	63	19	388

Oxalic Acid—
Seville, 7 c. 2 q. £10

Paint—
Alexandria, 36 kgs.
Amsterdam, 2 cs. 6 6 dms.
Axim, 10
Bilbao, 30
Boma 14
Bombay, 170
B. Ayres, 8 cks.
Calcutta, 2 85
Callao, 3 90 25
Cienfuegos, 68
Colon, 6 crts.
Curacao, 75
E. London, 100
Ferrol, 83
Havana, 2
La Guayra, 5
Las Palmas, 6 120
Lobito, 111
New York, 2 cs. 12
Old Calabar, 1
Panama, 25
Rosario, 12
San Juan, 120
Savanilla, 17
Sierra Leone, 1 cs. 104 8
Smyrna, 295
Trinidad, 3 cks. 66 pkgs.
Valparaiso, 75

Painters' Colours—
Antwerp, 13 cks. 1 cs.
Auckland, 110
Bremen, 100 bgs.
B. Ayres, 15 50 cs.
Mayaguez, 3 2 brls.
Oporto 1 cs.
Para, 29 tcs. 70 kgs 1
Pernambuco, 10 110 5
Portland, 2
Santos, 48 1
Seville, 15
Valparaiso, 45
Vera Cruz, 5 18

Paraffin Wax—
Bari, 20 bgs.
Genoa, 27
Para, 5 cks.
Rio de Janeiro, 120 brls.
Vera Cruz, 10 cs.

Phosphorus—

Hamburg,		5 c.	3 q.	£35
Hiogo,	2 t.			320

Potash Salts—
N. Orleans, 13 t. 5 c. 3 q. £250

Potassium Bichromate—

Ancona,		10 c.	3 q.	£21
Oporto,		7	3	17

Potassium Chlorate—

Gothenburg,	11 t.			£413
Fairwater,	2	10 c.		97
Ancona,	2			90
Shanghai,	5			195
Hiogo,	3			180
Odessa,	1	12		66
Sydney,	7	1		279
Lisbon,	2	4		84
Naples,	4	10		190
Vera Cruz,		4		8
Bilbao,			2 q.	13
Liban,	7			247
Rouen,		10		18
Rio de Janeiro,	12			408
Sao Paulo,		9		17
Portland, M.,		5		10
Genoa,		15		30
Funchal,		3		6
Rotterdam,	3			118
New York,	11	5		430
Philadelphia	10			385

Potassium Cyanide—

Corunna,	6 c.		£30
Savanilla,	5		32

Salt—

Accra	12 t.	10 c	
Adjush,	5		800 bgs.
Ambriz,	14		
Ambrizette,	11	1	
Antwerp,	400		4,400 sks.
Baltimore.		120	1,200
Barbadoes,	50		
Benin, 400 bgs.		250	
Boston,	160		
Brass,			100
B. Ayres,	2	2	
Cameroons,	43	10	
Christiania,	200		
Conakry,	15		
Dunedin,	112		
Egwanga,	54	13	
Halifax.	163	13	
Kingston,	10		
Lagos,	120		
Manila,		13	
Melbourne,	200		
Muculla,	33	12	
New Orleans,	130		
New York,	259	12	
Opobo,	84	16	
Philadelphia,	200		
Port Royal,	1,250		
Rio del Rey,	9	9	
Rouen,	15		
St John's, N.B.,	110		
Stockholm,	96	14	
Sydney,	300		
Wellington,	57		
Victoria, B.C.,	105		

Salt Cake—
Baltimore, 50 t. 3 c. £87

Saltpetre—

Carthagena, N.G.,		9 c.	£11
Bilbao,	2 t.	10	53
Sydney,		10	11

Satinite—
Calcutta, 4 t. 13 c. 3 q. £17

Sheep Dip—

M. Video,	1 t.	8 c.		£50
Natal,	1	19	3 q.	50
Pt. Elizabeth,		66 cs.		138
Punta Arenas,	24	8 c.		777
B. Ayres,	30	13	2	505

Soap—

Accra,	230 bxs.		
Alexandria,	30	40 kgs.	
Algoa Bay,	1,800		
Amsterdam,	200		519 cs.
Antwerp,			1,800
Antigua,	200		
Barbadoes,	550		
Bayin,			200
Batanga,	20		
Belize,	200		
Boma,	270		
Bombay,	2,470		1
Bonny,			1
Boston,		30 brls.	
Brisbane			7
Cabenda,	60		
Cameroons,	281		
C. C. Castle,			20
Cape Town,	4,311	10 cks.	
Colon	500		
Delagoa Bay,	1,110		10
E. London,	2,700		25
Genoa,	200		
Gibraltar,	440		
Gd. Canary,	465		
Guayaquil,	600		
Half Jack,	213		
Hamburg,	50		
Karac	53		
Lagos,	416		
Landana,	40		
Las Palmas,	234		
Malta,	19		
Manaos,	450		
Matadi,	285		
Melbourne,			500
Melilla,	295		
Mossel Bay,	100	5 bdls.	
N. Orleans,	409		
New York,	1 ck. 25		1
Old Calabar,			1
Palma,	524 bxs.		
Para,	300		
Patras,	100		
Penang,			3
Pt. Elizabeth,	600	26	25
Pt. Natal,	1,640	51	50
Quillo.	10		
Rangoon.			6
Rio Del Rey,	112		
Rio Munez,	6		
Rotterdam.	109		310
St. John's, N'fd.,	68		
St. Kitts,	100		
Sapeli.	150		
Shanghai,	2,125		
Singapore,	340		
Stockholm.			350
Sydney,	460		3,500
Trinidad,	800		
Valparaiso,			2

Soda Alkali—
Genoa, 151 brls.
Lisbon, 50
Melbourne, 40

Soda Ash—
Amsterdam, 250 bgs.
Antwerp, 500
Baltimore, 16 cks. 31 tcs. 1796
Barcelona, 30
Bilbao, 29 brls.
Boston, 143 164 tcs 2405
Brisbane, 180 461 brls.
B. Ayres, 90
Copenhagen, 500
Fiume, 9
Genoa, 579
Ghent, 20
Gothenburg, 190
Hamburg, 20 32
Leghorn, 50
Lisbon, 17
Malmo, 100
Maranham, 100
New York, 44 407 tcs. 6494
Paysandu, 100 brls.
Philadelphia, 122 289 tcs. 3840
Portland, Me., 4
Puerto Cabello, 9
Rio de Janeiro, 80 50 brls.
Rotterdam, 50
Smyrna, 697
Stockholm, 18
Tampico, 22
Valparaiso, 150
Venice, 11 200 kgs.

Soda Crystals—
Boston, 84 kgs. 360 brls. 100 bgs.
B. Ayres, 100 15 68 cks.
Genoa, 20
Gibraltar, 30
Halifax, 75
Malta, 100
Philadelphia, 420
Rio de Janeiro, 74
Valparaiso, 200
Alexandria, 200
St. John's, N'fd., 20

Sodium Bicarbonate—
Amsterdam, 20 kgs.
Baltimore, 400
Barcelona, 75
Batavia, 17
Bombay, 100
Boston, 5
Brindisi, 85
Brisbane, 60
B. Ayres, 179 cks.
Calcutta, 350
Colombo, 8
Copenhagen, 26
Genoa, 220 6
Geste, 1
Gothenburg, 27 pks.
Halifax, 50
La Libertad, 40
Marseilles, 75
Melbourne, 80 2 brls.
N. Orleans, 72
Paris, 298
Pt. Natal, 20
Rotterdam, 107 1
St. John's, N'fd., 20
Stockholm, 80 13

Sodium Carbonate—
Boston, 56 brls.
New York, 58

Sodium Chlorate—
Boston, 50 kgs.
Lisbon, 2 c
Newfairwater, 38 brls.
New York, 100 250 k

Sodium Hyposulphite—
Genoa, 35 brls.
Rotterdam. 10 cks.
Savanilla, 20 kgs.

Sodium Silicate—
Amsterdam, 10 cks.
Barcelona, 16
Bombay, 7 5 brls.
Boston, 21
Brisbane, 12
Corunna, 1
Melbourne, 144 26 dr
Newcastle, 14
New York, 90
Piræus, 20 16
Rotterdam, 20
Vera Cruz, 10

Sodium Sulphate—
Bombay, 15 brls.
Leghorn, 210 bgs.

Sulphur—
Tampico, 2 t. 2 c.
Boston, 150 3
St. John, N.B., 2 2
Portland, Me., 3

Sulphuric Acid—
Salaverry, 3 t. 3 c.

Superphosphates—
Genoa, 31 t. 13 c.
Morlaix, 100 2
Nantes, 48 26 3 q.

Tannic Acid—
Bahia, 8 c. 1 q.

Tin Crystals—
Trinidad, 23 c. 2 q.

Yarnish—
Bombay, 2 dr
C. C. Castle, 2 cs.
Genoa, 4 cks. 3
Madras, 1 10
Rosario, 2

White Lead—
Rosario, 2 kgs.

Zinc Chloride—
Bombay, 16 t. 3 c.

MANCHESTE

Week ending December 2nd

Ammonium Carbonate—
Rotterdam, 2 cks.
Hamburg, 22

Aniline Colours—
Rotterdam, 1 cs.
Reval, 13 kgs.

Aniline Oil—
Rotterdam, 26 dms. 1 bbl.

Aniline Salts—
Rotterdam, 4 pns.

Benzol—
Treport, 3 cks.
Rotterdam, 23

Caustic Soda—
Beyrout, 30 dms.
Monastier, 23
Rotterdam, 36

Chemicals (*otherwise under.*)—
Alexandria, 10 cks.
Mersyne, 2

Cottonseed Oil—
Tunis, 30 brls.

Painters' Colours—
Alexandria, 30 cks.

Pitch—
Cette, 394 t.
Antwerp, 6,187 c.

Soap—
Treport, 240 bxs. 12 cs.
Hamburg, 2 cks.
Paris, 2

Ash—
rout, 25 brls.
a, 25
oli, 53
ow—
is, 2 pks.
Oil—
ort, 26 cks.
werp, 10 pks.
nburg, 25
Salts—
werp, 123 cks.
ol—
erdam, 116 cks.

HULL.

ek ending November 28th.

l—
ien, 120 bgs.
itos—
ingfors, 50 bgs.
ol—
erdam, 9 dms.
erdam, 6
hing Powder—
bay, 100 cks.
ig, 5
York, 76
ic Soda—
a, 50 dms
urg, 9 cks.
icals *(otherwise undescribed)*
erdam, 31 cks. 20 pks.
werp, 30 cs.
ien, 120
bay, 46 2 1,280
eaux, 30
nhagen, 26 6 50
tiania, 7 690 slbs.
tirk, 1
enburg, 30
burg, 12 288 16 pks.
ngfors, 25 2
gsberg, 14
achee, 14
, 10
coping, 150 t.
es, 8 cks. 2
rdam, 50
n, 20
holm, 1 10
g, 1 25 kgs.
nseed Oil—
erdam, 3,003 c.
erp, 198
en, 102
aux, 68
hagen, 179
tiania, 17
irk, 266
nburg, 33
burg, 1,082
tilles, 5,180
rdam, 268
, 200
, 304
uffs *(otherwise undes.)—*
g, 3 cs.
gfors, 30 cks.
, 6
, 3
, 60 bgs.
, 3 cs.
, 20 cks.
k, 15 t.
d Oil—
rdam, 185 c.
ay, 313
, 7
tania, 417
heim, 93
urg, 600
chee, 40
ger, 45
aux, 35
hagen, 24
ansund, 35
e—
rk, 30 t.
na—
hagen, 3 dms.
rs' Colours—
rdam, 80 pks.
rp, 9 cks.
1 cs.
n, 2
y, 1 53 890

Copenhagen, 11 1
4 dms.
Christiania, 30 1 74
17 dms.
Ghent, 1
Genoa, 37
Gothenburg, 4 50
Hamburg, 4
H'lsingfors, 8 dms.
Konigsberg, 48
Marseilles, 4
Rouen, 31
Stettin, 42 1 10
Stockholm, 4 10

Pitch—
Amsterdam, 260 t.
Helsingfors, 140 cks.

Soap—
Christiania, 1 cs.
New York, 20 cks.

Tallow—
Amsterdam, 29 cks
Leghorn, 6
Stockholm, 25

Tar—
Amsterdam, 24 cks.
Copenhagen, 10
Dunkirk, 87
Harlingen, 1
Konigsberg, 4

Treacle—
Stockholm, 70 kgs.

Varnish—
Bombay, 35 kgs.
Copenhagen, 2 cans 1 cs.
Konigsberg, 1 ck.
Stettin 3
Amsterdam, 1

GLASGOW.

Week ending December 3rd.

Ammonium Sulphate—
Hamburg. 101 t. 8 c.

Aniline Dyes—
Calcutta, £65

Coal Products—
Naphtha
Havre, £121
Dieppe, 9 t. 14 c.
Pitch
Bombay, £30
Portugal, 125
New York, 45
U.S.A., 106
Dieppe, 453 t.
Tar
Bombay, £20
Boston, 52
Calcutta, 125
Madras, 46
Tar Acid
Boston, £36
Tar Oil
Hamburg, 1 t. 8 c.

Dextrine—
Providence, £117

Dried Blood—
Paris, 25 t. 2½ c.

Extracts—
Malaunay, £68

Gelatine—
Canada, £73

Glue—
Stockholm, £30

Guano—
Guernsey, 15 t. 15½ c.

Lead Nitrate—
Canada, £87

Lead Sulphate—
Stockholm, £70

Linseed Oil—
Porto Alegre, 1 t.
Trinidad, 14½ c.
Pietermaritzburg, 1 10¾
Transvaal, 1 12

Litharge—
Johannesburg, £21

Manganese—
Basle, £100
Fiume, 9 t. 18¾ c.

Paint—
Porto Alegre, £37
Colombo, £50. 15s.
Johannesburg, £64

Painters' Colours—
Trinidad, £18. 18s.
Calcutta, £847
Pietermaritzburg, qty.
Trinidad, "

Paraffin Wax—
Bombay, £121
Stockholm, 983
Cape Town, 50
Havre, 40
Paris, 20

Phosphoric Acid—
Trinidad, £34

Potash Salts—
Delagoa Bay, 28 t. 16 c.
Madras, 6 2¼
Mexico City, 2 10¾

Potassium Bichromate—
Bombay, £22
Amsterdam, 180
Stockholm, 52
Antwerp, 304
Venice, 90
Paris, 662
Rouen, 64

Rosin Oil—
Amsterdam, £24

Salt—
Calcutta, 5 t. ¾ c.

Salt Cake—
Terneuzen, 305 t.

Soap—
Antigua, 3 t. 15 c.
Barbadoes, 1 2½
Grenville, 1 6¾
Kingston, 12 8
Trinidad. 10 10¾

Sodium Bichromate—
Antwerp, 2 t. 12½ c.
Rouen, 18 17¾

Starch—
Rotterdam, 2 t.

Sulphur—
Calcutta, 6 t. 11 c.

Tallow—
Trinidad, 16 c.
Rotterdam, 6 t. 8
Johannesburg, £64

Treacle—
Abo, 11 t. 19 c.
Amsterdam, 2 14
Christiania, 31 13
Norrkoping, 101 12
Stockholm, 172 10
Gothenburg, 39 4½
Pretoria 1 10
Bergen, 17 10

TYNE.

Week ending November 28th.

Alkali—
Abo, 2 c.
Christiania, 2 t. 6
Amsterdam, 66 2
Riga, 121 11
Rotterdam, 8 16
Gothenburg, 20 1
Bergen, 2 16

Alum—
Rotterdam, 15 t. 2 c.

Antimony—
Barcelona, 1 t. 1 c.
Hamburg, 11
Riga, 40
Ergasteria, 3 q.
Rotterdam, 2

Arsenic—
Barcelona, 2 t. 7 c.
Odense, 17
Gothenburg, 2 6

Bleaching Powder—
Bergen, 15 t. 5 c.
Christiania, 8 14
Antwerp, 27 9
Amsterdam, 54 3
Riga, 25 8
Copenhagen, 2
Rotterdam, 20 11
Gothenburg, 45 6

Caustic Soda—
Christiania, 2 t. 18 c.
Hamburg, 37 5
Amsterdam, 1 9
Riga, 64 11
Gothenburg, 29 15
Rotterdam, 5 7

Litharge—
Helsingfors, 3 t. 11 c.
Hamburg, 1 2
Riga, 20 4

Magnesia—
Barcelona, 4 t. 18 c.
Hamburg, 18
Cartagena, 8

Manure—
Barcelona, 40 t. 13 c.
Guernsey, 8 18

Naphthaline—
Riga, 25 t. 3 c.

Paint—
Hamburg, 3 c.

Saltpetre—
Aarhuus, 8 t. 7 c.
Aalborg, 5

Soda—
Smyrna, 16 t. 5 c.
Aarhuus, 5
Amsterdam, 34 15
Svendborg, 53 4
Christiania, 5 3
Frederikshavn, 5
Rotterdam, 24

Soda Ash—
Christiania, 10 t.
Gothenburg, 60 2 c.
Bergen, 6

Sodium Hyposulphite—
Amsterdam. 1 t. 5 c.

Sodium Silicate—
Odessa, 15 t. 1 c.

Sodium Sulphate—
Gothenburg, 260 t.
Susti, 230

Sulphur—
Gothenburg, 84 t.
Antwerp, 5

Varnish—
Ergasteria, 1 c.

White Lead—
Copenhagen, 1 t. 1 c.

Zinc Ashes—
Antwerp, 15 c.

GOOLE.

Week ending November 25th.

Alkali—
Rotterdam, 1 ck.

Benzol—
Boulogne, 24 cks.
Rotterdam, 72 13 drs.

Bleaching Powder—
Harlingen, 65 cks.

Chemicals *(otherwise undescribed)*
Boulogne, 1 cs.
Hamburg, 8 cks.

Coal Products *(otherwise unaes.)—*
Amsterdam, 178 cks.
Antwerp, 1
Boulogne, 28
Ghent, 29
Hamburg, 13 1 cs.

Colours—
Boulogne, 5 cks. 1 cs.
Ghent, 1 5 1 tin
Hamburg, 8
Harlingen, 2 pks.
Rotterdam, 3 6

Dyestuffs *(otherwise undescribed)*
Ghent, 10 cks.
Rotterdam, 8 4 cs.

Manure—
Ghent, 200 bgs.
Ostend, 50 t.

Pitch—
Antwerp, 719 t.

Soap—
Rotterdam, 1 cs.

GRIMSBY.

Week ending November 28th.

Chemicals *(otherwise undescribed)*
Antwerp, 2 cs.
Hamburg, 32 drs.

Coal Products *(otherwise undes.)—*
Dieppe, 165 cks.
Hamburg, 3 pks.

Colours—
Antwerp, 4 cks. 3 cs.
Dieppe, 2 3
Hamburg, 5 5
Malmo, 4 4 1 bg.
Rotterdam, 1

Varnish—
Dieppe, 10 cks. 1 cs.

PRICES CURRENT. WEDNESDAY, DECEMBER 9TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids :—			
Acetic, 25 °/₀ and 40 °/₀ .. .. per cwt.	5/10½ &		8/9
,, Glacial .. .. ,,			0/-
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80°Tw. .. .. per lb.	0	0	1½
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 °/₀) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	24	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	10	0
Aluminoferric .. .. ,,	2	5	0
Aluminium (Ingot metal 98/99¾ %) .. .. nett per ton	155	0	0
Ammonia, Anhydrous .. .. ,,	0	1	4
,, ·880 = 28° B. .. .. per lb.	0	0	2¾
,, = 24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett	0	0	3
,, Muriate .. .. per ton	20	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/ &		35/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4¼
,, Sulphate (grey) London .. .. .. per ton	7	11	3
,, ,, (grey) Hull .. .. ,,	7	7	6
Aniline Oil (pure) .. .. per lb.	0	0	10¼
Aniline Salt ,, ... ,,	0	0	9¾
Antimony .. .. per ton	30	0	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42/6 to 65/-		
Bleaching Powder, 35 % .. .. nett	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	1	1	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	9
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	3	0
,, 50/90 ,, ... ,,	0	2	6
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	2	1
Creosote (ordinary) .. .. ,,	0	0	2
,, (filtered for Lucigen light) .. .. .. ,,	0	0	2½
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	3
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	10	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	7
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	48	12	6
,, Sulphate .. .. ,,	17	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	37	10	0
,, (distilled S.G. 1250° .. .. ,,	70	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	13	0	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	10	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. .. ,,	16	10	0
,, *Nitrate* .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	10	0
,, ,, (grey) (ex ship .. .. ,,	8	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	1
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	8
,, Calcined Magne .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	8
,, ,, Miscible, 60° O.P .. .. .. ,,	0	3	0
Oils :—			
Cotton-seed .. .. per ton	16	10	0
Linseed .. .. ,,	17	10	0
Petroleum, American .. .. per gallon	0	0	7
Stearine .. .. per ton	20	10	0
Phosphorus (yellow) .. .. per lb.	0	2	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett	per lb.	0	0	4½
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	0
,, Chlorate .. .. per lb.	0	0	4
,, Cyanide, 98% .. .. ,,	0	0	11½
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	21	0	0
,, ,, (Caustic Potash) 70/75 % .. ,,	20	0	0
,, Nitrate (refined) .. .. per cwt.	1	1	6
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	5½
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	3½
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. ,, ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	5	0
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5
,, Borate (Borax) .. .. net, per ton.	19	5	0
,, Bichromate .. .. per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton	9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ,,	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	1	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4½
,, Potassium .. .. ,,	0	0	6½
Sulphur (Flowers) .. .. per ton.	7	10	0
(Roll Brimstone) .. .. ,,	6	10	0
,, Brimstone : Best Quality .. .. .. ,,	4	15	0
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	10	0
Tin Crystals .. .. per lb.	0	0	8½
,, English Ingots .. .. per ton	62	10	0
Zinc Spelter) .. .. ,,	17	15	0
,, Chloride (solution, 100° Tw.) .. .. .. ,,	5	2	6

THE

CHEMICAL TRADE JOURNAL

AND

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tisements intended for insertion in the current week's issue each the office by **Thursday morning** at the latest.

CURRENT TOPICS.

WORKS' EFFLUENTS IN SEWERS.

IN the judgment on what is generally known as the Peebles Case, which was delivered by Mr. Justice Charles this week, a point of great importance to manufacturers has been settled. Settled, that is to say, as far as any point of law is ever settled.

The points of the case may be briefly summarised as follows:—The late Mr. P. C. Peebles, a papermaker, brought an action against the Oswaldtwistle District Council, demanding that under the Public Health Act they should cause to be made such sewers as might be necessary for effectually draining their district, and in particular for effectually draining the plaintiff's premises, and, further, that the defendants should, according to the provisions of the Rivers Pollution Act, 1876, give facilities for enabling the plaintiff to carry into the sewers the liquids proceeding from the manufacturing processes.

The action has since been carried on by the company that has acquired the business, who sought a mandamus, and the judgment this week decides in favour of the papermaker, and thus in favour of manufacturers as a class.

The scope of the words "premises" and "house" according to the Act were most carefully considered, and argued at length in the judgment, as was also the nature of the liquids that were to be allowed to flow into the sewers when they had been constructed.

Regarding the subsidiary claim made by the plaintiffs under the Rivers Pollution Act of 1876, for a mandamus, compelling the defendants to provide facilities for carrying liquids from works into the sewers, it appears that owing to certain technicalities as to procedure, judgment was given against the plaintiff company, on this claim, but a mandamus was granted "commanding the defendants to cause to be made such sewers as may be necessary for effectually draining their district under the Public Health Act, 1875, and, in particular, the plaintiffs' premises."

While admitting that the case does not fail to suggest complications for local authorities in the matter of sewage treatment, still, it is a great point for manufacturers, and, in a sense, we all live by feeding on each other. It resolves itself into a question of whether it is not fairer for all to bear a small share in the cost of surmounting the evils attendant on most manufacturing processes, than for the bulk of the expense to fall on to those who are mainly instrumental in maintaining the district in a state of healthy industrial activity. The Council have decided to appeal—so more of this anon.

BEETROOT CULTIVATION.

We have referred to this question on several occasions in connection with the work that has been done in this direction by Dr. G. Schack-Sommer, and it would now appear that Lord Masham is devoting his energies to the subject.

It is pleasing to be able to say as much, for although we do not look upon this particular crop as a panacea for all the troubles agriculture is suffering from, still there can be little doubt, after the trials that have been recorded in these columns and elsewhere, that the idea of extending the cultivation of sugar beets is worthy of something more than mere consideration. It is said by those who always advocate a do-nothing policy, on the principle of "what's the use of anything—why, nuffink," that the proposal has been tried, and failed to a tune that some parties have not forgotten yet.

Without the slightest hesitation we admit this as true, despite the exaggerations that usually form part of the tale. But the trial was a very half-hearted one, and its failure was essentially due to the poor response farmers made, and as they were responsible for the raw material, it is scarcely surprising that the sugar factory had to cease operations.

But apart from this and other mitigations the condition of affairs was very different then from what it is now. We have learnt more forcibly than ever that to benefit farmers you must not only indicate sound possibilities, but go further and demonstrate their soundness, next teach them how to turn them to advantage, and sometimes as good as insure the crop lest their lack of experience and enterprise should make a mess of their first essay at something "newfangled."

So great are the straits in which agriculturists claim to be just now, that we think they are likely to make a better effort to grow beets out of sheer desperation. As yet the prospect of an attempt at systematic cultivation and production is such and nothing more, but with a little nursing there should yet come the time when it will only be the hopelessly abject ones who have not mastered what there is new about beetroot cultivation.

Lord Masham's offer of a 100 guinea prize for the best essay on the profitable cultivation of beetroot and the production of sugar from it, is a very natural, and, may be, helpful preliminary, but we venture to opine that it is unnecessary, as of literature there is no deficiency, and even field experiments of considerable magnitude and duration have also told all they have to teach. What we are short of now is the opportunity—which in this case spells capital—to test, on an industrial scale, the results that such trials have proved by demonstration. As regards the question of "cutting" the Colonial cane sugar growers by such a step, the present position cannot be aggravated until English beet sugar has supplanted all that now comes from Germany and France, and goodness knows there is plenty of room for development here before that state comes to pass. Even when it does, is it not better for the competing product to be home-grown rather than to be of foreign origin and bounty fed? There is far more likelihood of the suffering colonials obtaining redress at the hands of the mother Government than from foreign competitors. We hope Lord Masham will see his way to hurry along with the essentials, now that the preliminaries have so plainly justified further endeavours to advance. If he does, we think, he will find no lack of supporters ready to follow on his very heels, and by thus multiplying footprints make a track that will not be so easily effaced.

USE OF OXYGEN IN COLLIERY ACCIDENTS.

It is with more than ordinary pleasure that we are able to record the fact of colliery proprietors being aroused to a sense of the advantages of oxygen as a means of rescue after explosions of coal dust or gas in collieries.

In our recent article on the subject we purposely paid special attention to certain points which were of chief interest to colliery managers, and elsewhere in this issue an ac is given of a lecture delivered last week on life-s appliances, especially suited for rescue work in coal m sewers, and such like places.

It must not be forgotten that although oxygen is so as a resuscitant, under many circumstances the victims c be reached, and so cannot be treated. The apparatus desc is specially intended for enabling the rescuers to work poisonous atmosphere and remove the rescued as speed possible.

The lecturer has followed with flattering similarit recommendations we prescribed in our recent article, a the principle of *chacun à son métier*, we are heartily pl that one in close touch with the mining industry has upon himself the task of making known, and adapt requirements, this sustaining and revivifying gas.

THE BEET SUGAR INDUSTRY OF FRAN

THE United States Consul at Havre, in a recent report, de the beet-sugar industry of France. The crop, he says, p farmer better than wheat or any other agricultural product, and l large acreage is under beets. In 1894 the area was 1,700,000 and the production nearly 18½ millions tons, or nearly 11 tons acre; 50 to 60 per cent. of all this is used for the production o The experience of French cultivators is stated to be that the growing an acre of beets is £2., omitting the cost of fertilizers, w is not always necessary to employ. It is said, too, that the lea stalks left on the field will furnish much more manure, after the been fed to cattle, than the beet requires. The bounty paid on exported from Germany has led to less activity in beet sugar pro in France in the last two years. Nevertheless the total q exported in 1894-95 was 166,287 tons, of which 119,139 tons w England. The advantage of beet cultivation is that there is no every part of the vegetable can be used in one way or another. pulp, after the juice has been expressed for sugar, is largely ea cattle, and is found to be very nourishing. The leaves and stalks fresh, increase a cow's milk; when dry they afford excellent food. "Altogether the beetroot or the residue after the juice ha expressed supplies, with the leaves and stalks, nourishment for and sheep more abundant, perhaps, than any other forage that have been cultivated on the land." It is said that the lea frequently used for adulterating tobacco. The French experts that all land suitable for growing wheat will also grow beets; bu necessary to avoid a soil too compact or containing too much The report enters into some detail in the question of soils, pr manuring (when necessary), modes of cultivation, harvesti preserving the crop, and a few words are added as to the manu of sugar. Something is said, also, as to experiments being m France, under the authority of the Ministry of Commerce, for obt illuminating alcohol from the roots.

A NEW SOURCE OF TANNIN.—A new source of tannin i "Pyinkado" tree, which grows in Burmah, as reported in an I contemporary. It is known scientifically as *Xylia dolabriformis*. compared with cutch, which Dr. Watt says yields from 42 to cent. of tannin. Hundreds of tons of pyinkado bark and sawdu said to be annually carted away as refuse from the saw-mills in B

METRIC WEIGHTS AND MEASURES.—The secretary of the Decimal Association has received a communication from the F Office as to the adoption of the metric weights and measures in E On the invitation of her Majesty's Agent and Consul-General at the British Chamber of Commerce at Alexandria considere question, and the unanimous opinion of the committee was th adoption of the metric weights and measures in the United Kin would be of advantage to British traders in Egypt. Lord Crom forwarding the report to the Foreign Office, remarks that a very g opinion undoubtedly exists in Egypt that British trade with country would benefit by the adoption of the metric system of w and measures. and adds that the compulsory introduction of the system was strongly urged upon the Egyptian Government some ago, when it was held, and in the opinion of Lord Cromer wisely that so brusque a change was to be deprecated. On the Egy railways, however, and in fact wherever there are Government wo machines, the metric system has been adopted, and it is hoped will thus gradually take root throughout Egypt.

The Patent List.

is list is compiled from Official sources in the Manchester ical Laboratory, under the immediate supervision of E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

PPLICATIONS FOR ENGLISH LETTERS PATENT.

cing Carbon from Asbestos. J. A. Cumine and E. J. Dexter. 27,138. ovember 30.

vements in Fibre Washing Machines. W. Warburton. 27,141. ovember 30.

ving Sludge from Sewage Tanks. E. Codling. 27,154. Nov. 30.

sive Compounds. A. Nobel. 27,197. November 30.

facture of Plaster of Paris and other useful Products. W. others. 27,200. November 30.

vements in Respirators or Lung Preservers. G. Zimmer. 27,215. ovember 30.

, etc., Scouring Composition. A. Cawood. 27,263. December 1.

ng and Purifying Water. J. E. Carroll. 27,283. December 1.

cting Metals from their Ores. J. J. Shedlock. 27,346. December 1.

vements in the Treatment of Skins. J. J. Mann and F. Chaplet. 410. December 2.

n Inhaling Apparatus. H. J. Robson. 27,426. December 2.

g Crystallized Starch from Maize. R. Goernemann. 27,471. Dec. 2.

ved Apparatus for the Granulation of Crystallizable Liquids. J. ossé. 27,477. December 3.

age Water Purifier. J. Dunn. 27,478. December 3.

, etc., Drying Apparatus. H. C. Longsdon. 27,484. December 3.

for Grinding and Mixing Chemicals. T. Breakell and J. Gaskell. 486. December 3.

ing Acetylene or Water Gas to Driving Gas, etc., Engines. F. E. ker. 27,496. December 3.

ying Sewage, etc. F. P. Candy. 27,513. December 3.

tegrating or Mixing Powders, etc. H. Dietz. 27,571. December 3.

ovements in Forced Draught Furnaces. Caddy and Co., Ltd., and W. Melville. 27,668. December 4.

for the Manufacture of Matches. L. Braly, L. Legat, A. Tachauer, d A. Delpey. 27,680. December 4.

cing Fast Colours on Vegetable Fibre. H. W. Kearns and J. rnes. 27,742. December 5.

facture of Calcium Carbide. A. Kiesewalter. 27,744. December 5.

natically Recording and Regulating the Percentage Volume of a aseous Mixture. M. Arndt. 27,757. December 5.

ratus for Concentrating Sulphuric and other Acids. E. Dyson. 769. December 5.

ning Metals or Alloys by Electrolysis. P. Marino. 27,776. Dec 5.

and Alkali Resisting Vessels. H. Niewerth. 27,778. December 5.

ng Metal Plates, etc., with Lead. C. Crocker and W. T. Lougher. 801. December 5.

BSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

ese abstracts are specially prepared for the Chemical Trade Journal, ALL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the .*

thod of and Apparatus for Cleansing and Recovering Greases and il from Cotton and other Waste and Wool. G. E. Wright, Wollaton, ottingham, and W. Monk, 428, Alfreton-road, Nottingham. Eng. Pat. 22,183. ovember 21, 1895.

is invention is purely a mechanical one. The material to be ed is extracted with a suitable solvent in a press, somewhat similar at used for seed crushing. After a sufficient number of extractions olvent, with the grease in solution, is removed by expression, and olvent volatilized and recovered in a suitable apparatus which s a part of the whole plant. There are one or two mechanical s about the arrangement of this part of the plant which are note- hy. The whole invention, however, is fully set forth in the eleven drawings which accompany the specification.

rovements in or Connected with Apparatus for Filtering Sewage and ther Liquids. T. B. Jones, Deneholme, Harrogate. Eng. Pat. 24,943. December 30, 1895.

n open vertical framework carries a number of shallow trays, sup- ed by rails travelling on rollers fixed in the framework. The trays o distanced as to leave an air space between each so that eration tained, and removal for cleaning, etc., is an easy matter. The themselves are provided near the top with a perforated plate, h evenly distributes the sewage on to the filtering medium beneath, h, of course, rests on the perforated bottom of the tray. There is drawing.

rovements in Apparatus for Revivifying Spent Limes, and for Calcining Cements and Ores or like Materials. G. R. Hislop, Gas- works, Paisley. Eng. Pat. 759. January 11, 1896.

pent limes and bleach, or cements and other articles that need ining can be treated in this apparatus. The material, fed in through a hopper, first passes through crushing rolls and thence into a dryer, which is a revolving horizontal cylinder, fitted internally with ribs or corrugations to assist in the stirring of the contents. From the dryer the material is passed into a distributor, which supplies the material in a well distributed form to the calcining revolving cylinders. These are of small diameter—about 8 or 9 inches – and are fed internally with the gases from a producer or other furnace. In the case of gas lime a portion of the H_2S is driven off in the drying cylinder under the action of the CO_2 in the furnace gases. There are three figures, showing different views of the complete plant.

An Improved Process for Treating the Bye-products of Sugar Works and Sugar Refineries. M. Sachs, Ekatérinenstrasse, Kiew, Russia. Eng. Pat. 1,101. January 16, 1896.

The so-called second product in sugar boiling, *i.e.*, the residuum from the first crystallization, is boiled in a vacuum pan, additions being constantly made to make up for the amounts drawn off into a mixing vessel. The additions are kept at a higher temperature than the vacuum pan, so that their introduction does not stop the boiling. This boiling for crystals is continued for two to five days, or until a second crystallization of a mealy or floury nature occurs with the first. The whole contents of the vacuum pan are then drawn off, and the process begun afresh. The duration of the crystallization periods in the mixing vessels depends on circumstances. It is claimed that a very considerable increase of white sugar is obtained by this method of procedure, and that bone black filtration can be dispensed with.

Improvements in the Manufacture of Paper which is Proof against the Action of Water, Air, Grease, and Weak Acids. A. Zimmermann, 6 and 7, Cross-lane, St Mary-at-Hill, London. Eng. Pat. 22,625. November 26, 1895.

Paper containing hydrocellulose is treated with a solution of pyroxyline in acetic acid, or other solvent. When the paper is treated in this way the film of pyroxyline does not detach itself, as is the case with paper containing no hydrocellulose. Occasionally it is desirable to treat the paper in a dilute bath of cuprammonium—3% to 5%—wash it in water, and then pass through the pyroxyline solution, which should contain 2% to 3%.

Improved Means and Appliances for the Treatment of Sewage at Precipitating and at Outfall Works. R. H. Reeves, Cedardale, Putney Bridge-road, Putney. Eng. Pat. 22,502. November 25, 1895.

Three improvements are suggested. The first relates to the preparation of a continuous supply of lime-water, by a method so obvious that a detailed description is not necessary. The second proposes to treat bad effluents with manganate of soda and sulphuric acid before passing to the filter beds, which are tank filters of ballast, breeze, sand, etc. The third suggestion has reference to the disposal of the sludge from the tanks. It is run on to decanting roller beds, on which the solids settle, the clear supernatant liquid being drawn off, and the sludge placed on beds to dry like peat. If required in a very dry powdery form, it is placed in sacks and finished in a drying-room heated by artificial means.

COMMERCIAL FIBRES.—A Travers Lecture on "Recent Researches in Commercial Fibres" was recently delivered at the London Institution by Dr. Morris, C.M G., Assistant Director of the Royal Gardens, Kew. After a brief review of the progress made in the production of fibres already familiar in commerce, Dr. Morris directed attention to recent developments in the singularly interesting fibres known as China grass and ramie. These, he said, had hitherto been regarded as at once the most attractive and elusive of fibres, and as having not only raised the greatest expectations but led to the most lamentable failures As the result of efforts extending over fifty years, these fibres were at last being utilised in this country in the manufacture of textile fabrics of a high order. The two plants concerned were members of the nettle family, but without stinging hairs. The China grass (*Böhmeria nivea*). a native of China, was suitable for cultivation in warm temperate countries; while the plant known in Assam as rhea, and in the Malay Islands as ramie (*B. tenacissima*), was suitable only for tropical counries. It was pointed out that remunerative crops could be grown only in well-drained soils of an exceptional character. A plentiful rainfall well distributed over the year was essential, as well as a high and uniform temperature. Under such conditions crops of stems weighing 15 to 20 tons per acre could be produced in the year. This quantity would yield ribands or raw fibre of the value at present prices of £8; or filasse (the finished fibre), worth about £14 The cost of the cultivation in suitable localities was estimated at £4 per acre. The cultivation was recommended as likely to be advantageous in some parts of the West Indies, and especially to supplement that of sugar. The fibre when completely cleaned was capable of being used for the finest lace as well as for canvas and sailcloth. In fact, the industrial application of this beautiful fibre was calculcated to prove of the greatest service in the manufacture of textile fabrics of all kinds.

Reports of Companies.

LAGUNAS SYNDICATE, LTD.

THE first annual meeting of the shareholders of this company was held last week at Winchester-house, London. Mr. Robert Harvey presided, and, at the commencement of the proceedings, explained that his presence in the chair was in consequence of the death of Colonel North, whose loss, he felt sure, they all deeply regretted. Turning to the report, he said that representations had been made to the board by several large and influential English shareholders to the effect that they considered it unnecessary that such a large sum as £52,000. should be carried forward, as was proposed. The Belgian shareholders had also expressed their desire to have a dividend. In these circumstances the board met on the previous day, and passed a resolution to recommend the payment of a dividend of 4s. per share, less income tax, to shareholders on the register on the 9th inst., the dividend to be payable on the 22nd inst. That would absorb £44,000. With regard to the item in the accounts—nitrate in stock, sold but not delivered, £78,772.—some gentlemen appeared to be under the impression that this large amount was due to their having encroached on their make after June 30 last, the date at which the accounts were closed, but that was not the case. That sum represented the absolute net profits earned up to June 30, and it did not include a single quintal which had been manufactured during the period that had since elapsed. He then moved the adoption of the report. Mr. George Fleming seconded the motion. Mr. Crews asked for some information with reference to the pending legal disputes, and Mr. Yule inquired if the debenture issue had been duly registered in Chili and recognised by the authorities there. The Chairman, in reply, referred at considerable length to attacks which had been made on the syndicate and to the pending litigation. It had been suggested, he said, that the board purposed carrying forward the £52,000 so that they might have money with which to defend the action that had been instituted against them. That was untrue. The directors were all men of substance, and did not desire to use the syndicate's money in such a manner. They thought that with a large sum at command as working capital the position of the syndicate would be strengthened, but as their motives had been misinterpreted they had decided to recommend the payment of a dividend. If they lost the case—which, he was advised by eminent counsel, was not at all probable—and it was right that the syndicate should meet the costs thereby incurred, probably they would have to do it. The directors who were being proceeded against held more than half the capital of the syndicate, and they would defend the interests of the shareholders to the utmost extent. He had no apprehension of losing, but if they did he thought the shareholders would not be asked for a farthing. As to the debenture issue, he said that they were at first prohibited from registering the deed of mortgage on behalf of the debenture holders. The board, however, appealed against that prohibition, and a decision had been given in their favour. A shareholder asked if, in the opinion of the board, it was prudent to pay the proposed dividend. The Chairman replied that the directors were unanimous in agreeing to recommend it. The syndicate was in a very sound position. They were now making most satisfactory profits, and had more than $500,000 on the other side and large stocks of caliche. He thought there was no unwisdom in paying the dividend. However the lawsuit might terminate he did not think it would make a difference of more than £20,000 to them. The report was adopted. Mr. Ellis then moved the adjournment of the meeting and the appointment of a committee to investigate the position of the syndicate. This was seconded by Mr. Yule, and was defeated by an overwhelming majority.

LONDON NITRATE COMPANY, LIMITED.

The ninth annual general meeting of this company was held at Liverpool, on Tuesday, Mr. Frank Tobin, the chairman of the company, presiding. The directors' report stated that the profit on trading during the past year amounted to £18,798, and a dividend of 8 per cent. on the preference capital of the company was recommended. In moving the approval of the report, the Chairman said the profits earned were exceedingly satisfactory if they compared them with the results obtained by other companies during the same period, and took into consideration the very depressed condition of the nitrate industry. The new grounds of the company and the new machinery with which they had been equipped had cost £76,000, and in order to meet that large outlay they had had to provide fresh capital, which they had done by issuing £30,000 of 5 per cent. debentures at par. The new machinery had proved very satisfactory, leading to a reduction in the cost of production, and the caliche from the new grounds had turned out exceedingly well. The report was adopted. Mr. F. G. Lomax was re-elected a director of the company.

THE CASSEL GOLD EXTRACTING CO., LIMITED.

The report by the directors to the twelfth ordinary general meet of the members of this company is as follows:—As mentioned in last report the business of the Australian company has been interfe with by the uncertainty regarding the position of patent matters pend the decision of the Court of Appeal in London, and we added th since that decision had been given, and the British amendment allow we believed that a change for the better had occurred, and that business of the company was improving. These remarks may be ta as generally describing the position during the past year. An impor transaction was carried through in the month of March by the Au lian company in the flotation of the Cobar Gold Mines (Limi These mines were very carefully examined by the experts of Australian company, and trials of the ore on a fair scale were ca out on the spot, and it says much for the confidence in the mines, for the thoroughness with which the business was gone into, that whole of the necessary working capital was subscribed and the flot accomplished without appealing to the public. The original favour reports have been confirmed by the manager appointed since company was formed. The Australian company retains a large int in the property, and profitable results are anticipated from the wor The Mexican company had recently carried through their reconstruc successfully when our last report was issued, and it appears that progress of the company in the interval has been very satisfactory, the proposal then formulated for the flotation of a company called British Gold Mines of Mexico (Limited), to take up and develop promising mining business, was favourably received. We wrote in last report as to the backwardness of mining development in Br Columbia owing to the lack of capital, but we remarked that t were signs that the attention of British capitalists was being direct that quarter, and that a time of greater activity was at hand. has been borne out during the year. The proposed plant at Bar ville, in the Cariboo district, under the auspices of the British Colu Government, referred to in our last report, has since become accomplished fact, and operations were started in August. Our adv are that the operations have so far been very successful and have co borated the preliminary trials, showing the suitability of the or that district for the process. Preliminary trials of the process at a m in Ontario have been successful, and work is now proceeding t under royalty. Some progress has been made in business in Chili. royalty contract has been entered into with a company which cover extensive district, and a separate syndicate has also been formed working a large accumulation of tailings. The Cassel Company taken an interest in and is represented on the boards of both compa A plant to treat 1,000 tons per month is now being prepared by and will be sent out shortly. The local company in which we shareholders reports that it has been working at a profit, and tha is about to increase the power so as to give a larger output. The m are reported to be improving in value. The business of the Amer company has made good progress during the year. The patent posi is, of course, a large factor there, and it has been strengthened by fact that an infringing company, the Mercur Company of Utah, aga which an action has been proceeding for twelve months, seeing strength of the American company's position, and specially since decision of the Appeal Court in London, decided to withdraw from action, paying $20 000, entering into a royalty contract, and owni ing to a strong judgment against themselves as infringers and in fav of the validity of the American patents. This has had a benefi effect in the increase of business. Though, as might be expected, royalty income from South Africa during the year was reduced, general business of the company, as evidenced by its annual rep cannot be considered unsatisfactory. The rest of the report deals w patent litigation and other matters.

THE NEW LABORATORY AT LIVERPOOL.—A new chemistry sec of the chemical laboratory of University College, Liverpool, was ope on Saturday last by Lord Derby. Nearly twelve years ago a thea classroom, and apparatus were available for students, but difficul attending the demolition of old property and lack of funds preven the full scheme being carried out. Now, however, thanks to Mes Gossage and Timmis, Widnes, chemical manufacturers, who have gi £7,000. between them for completing a further section, includ main laboratories and rooms, besides £1,000 each promised by John Brunner, Mr. E. K. Muspratt and Messrs. Lever Broth University College, Liverpool, will be possessed of chemical laborato of great completeness. Professor Ramsay having delivered an inter ing scientific address, Lord Derby, as president of the College, rece from Mr. Timmis, one of the donors, a silver key of the laborat and expressed regret that Mr. Gossage, who had given his munifi contribution in memory of his father, William Gossage, one of the m fertile inventors of the century, was unable to be present owing illness.

DERBY SOCIETY OF ENGINEERS.

HE opening meeting of the present session of the above society was held at the Mechanics' Institution, Derby, on Friday evening, mber 4th, Mr. H. R. Hewitt, H.M. Inspector of Mines, being in chair. The attendance of members was not up to the average, tless owing to the inclement weather. Mr. C. E. Wolff, B.Sc., ecretary, read the minutes of the last meeting, and mentioned that ommittee have decided to offer a medal for the best paper read e the society during the session. The Chairman then called on F. J. R Carulla, who had been asked to give the opening address. Carulla said it was with sincere regret he had learnt that their dent, Sir Alfred Seale Haslam, had been unable to open the n owing to his numerous engagements, as they had lost much by ubstitution. A subject had recently been occupying much of his speaker's) attention, which he would bring before them, viz.,

SULPHATE OF AMMONIA.

Berridge, their worthy vice-president, had already read a paper on product, chiefly from the manufacturing point of view, but he sed to deal with it on that occasion from a commercial standpoint. electric light, enriched water gas, as being now made in Birham, acetylene, the coming gas, will all contribute to diminish the t of coal gas, and consequently of sulphate of ammonia. Blast ces on the other hand, especially in times when the iron trade is will have the opposite effect. In regard to the introduction of for the recovery of ammonia at ironworks, Mr. Carulla said e Scotch are so often twitted with their economical tendencies as a e, that it may be well to consider how this trait may have conted to the discovery just described. How small the quantity of onia present in blast furnace gases must be, you will have gathered the fact that two scientific experts could not detect its presence. ne gases leave the furnace there is perhaps not more than one of a grain of real ammonia present in each cubic foot. It may justice be supposed that only one brought up to see the value of economies could have thought of saving traces that escaped the vation of trained experts, and certainly it could only have been gst an enterprising people, and by a rich firm that the problem have been worked out." This branch of the iron trade has ed such proportions that in Scotland the apparatus for collecting mmonia, tar, &c., from the gases of the iron blast furnaces had ly cost a few years ago £444,600., or more than the iron making of the particular firms possessing the new appliances. It has calculated that England only uses $\frac{1}{68}$th part of the quantity of genous manures (sulphate of ammonia and nitrate of soda) which it consume with advantage, and the speaker thought that there was field for the employment of all the sulphate that could be made any years to come if only the ignorance of the farmer was removed e dissemination of appropriate literature. Mr. Carulla concluded: cannot help being impressed by the conviction that great variawill be seen in the sulphate of ammonia market in the future as past, that the present depression is only temporary, and that we opefully look forward to better times." Mr. Carulla desiring a ssion, the Chairman said that the refrigerating power of ammonia been referred to, and he would mention its value for freezing y strata when sinking pit shafts. Ammonia had been found of tmost value for such purposes. He certainly thought as regards alue of the unit of nitrogen that it was a great anomaly that farmers d be willing to pay more for it in nitrate of soda than in sulphate monia. In connection with acetylene he would ask Mr. Carulla ner there was not considerable danger in its use in case of leakage. Wolff remarked that it had been said in the address that "only gnorance of the farmer had to be overcome," but it was his ience that this was rather a big "only." He remembered trying nvince a farmer that in a certain case phosphates would be useful, was no good, as the farmer's whole idea was to use lime. Such are frequent, even in Derbyshire, where lime abounds in the soil, there is more than enough for the requirements of the crops. gard to refrigerating arrangements, their use is increasing, ially in America, where already the pipes for warming the railway ges in winter have been used in summer to circulate a cold current eans of ice. This was done in England for the first time last in the Queen's saloon, when going to Balmoral. He would point regard to water gas enriched by oil that it has a much higher ific value than ordinary coal gas, and requires more air for its ustion, and its superiority over ordinary coal gas for illuminating ses is, therefore, questionable. There were very varied opinions the amount of acetylene that might safely escape into air of a room; some said more and others less, than e case of coal gas. He would like to know who was right. Topwell remarked that carbonic acid was running ammonia very as a refrigerating agent. In regard to the proposal of using the pipes for heating and for cooling houses and carriages, he would say that heating pipes should be at the bottom of a room, whilst cooling pipes should be at the top, so that the idea was not very practical. On the motion of the Chairman, thanks were accorded for the address to Mr. Carulla, who replied saying: The presence of phosphide of calcium in some of the early specimens of carbide had given rise to dangerous accidents owing to the formation of phosphoretted hydrogen which ignited on coming into contact with air. If, therefore, any air was left in the acetylene receiver, an explosion under such circumstances was almost sure to occur. Speaking from memory, the limits of explosion for mixtures of acetylene and air were 3 per cent. and 82 per cent., whereas for coal gas they were only 6 per cent. and 29 per cent. This would also answer Mr. Wolff's question, as it could be seen from these figures how much more dangerous acetylene was than coal gas in the case of an escape. Mr. Wolff: My question referred to the danger of breathing the gases, not to their explosive properties. Mr. Carulla: I am glad I misunderstood you, as it has given me the opportunity of pointing out the danger in connection with this question. The chances of explosion in case of leakage are unquestionably much larger in the case of acetylene than in the case of coal gas. I am unable to say which is the more poisonous, coal gas or acetylene, but, judging from its offensive smell, probably acetylene. The reference made by Mr. Wolff to the subject of lime as a favourite manure reminds me to mention that lime in the caustic form should be kept away from sulphate of ammonia if this is not to be completely spoiled, as the ammonia is driven off when the two substances are brought together. This point is of such importance that, like the good man who said that if there were eternal punishment the fact should be stated on every page of the Bible, so in all sulphate literature it should be boldly printed on every page that lime and sulphate of ammonia should never be brought together. Failures, doubtless have occurred through this cause, and sulphate of ammonia may have been discredited, when the want of success was only due to ignorance. Intelligently used, sulphate of ammonia is the most valuable nitrogenous manure that we possess. The proceedings then terminatad.

ARSENIC IN LINENETTE.

THE USE AND ABUSE OF ANALYSIS.

A CASE of unusual interest to drapers and to the public generally was heard before Judge Lushington, at the Croydon County Court, on Wednesday last week. An action was brought by Mrs. Bennett, Birdhurst-road, Croydon, wife of a London tea merchant, against Messrs. Grant Brothers, drapers, High-street, Croydon, damages being claimed for illness caused, it was alleged, by arsenical poisoning, caused by using a piece of linenette or dress material purchased from the defendants. Mr. Lynch, barrister, was for the plaintiff, and Mr. Colam was for the defendants.

Mr. Lynch outlined the case for the plaintiff at length, and added that the action was one of vast importance to the public at large. On May 11th his client sent her cook to the defendants' premises for a piece of lining, or linenette, to match a green silk dress which she was wearing, and was given a piece of linenette 5½ yards in length. Mrs. Bennett proceeded that night to cut it and make it up, and became seriously ill. There was a pigment upon it. Dr. Wishaw, who was called in, found out that the plaintiff was suffering from arsenical poisoning. Counsel did not for one moment contend that Messrs. Grant were aware that the material contained arsenic. The stuff was sold just as it was received from the manufacturers at Manchester, who were Messrs. Barlow and Jones, Limited. That, however, was no defence to the charge.

Mr. Colam: We say that if it does contain arsenic it is not in a sufficient quantity to cause harm.

Evidence as to the purchase of the linenette having been given,

Mrs. Bennett said she was the wife of a tea merchant. She used the material called linenette in connection with a dress. Soon after using it she began to be thirsty, feverish, and sick. She also experienced cramp in her legs and had to go to bed. She resumed work on Tuesday morning, but became worse, and at night she became seriously ill. She felt sick and giddy, and had cramp in the calves of her legs.

His Honour: Had you any idea the linenette was the cause of it?

Plaintiff: Yes, I had. I mentioned it to the cook. On Tuesday (she continued) the pain got worse and she passed a bad night. On Wednesday she felt much worse and Dr. Wishaw came. The vomiting continued until the 24th when Dr. Wishaw ordered her to the seaside, and she went to Boscastle by easy stages. Cross-examined: She recollected Dr. Luff coming down from London to see her and asking her if she felt any numbness or pains in her hands and feet. She did not tell the doctor that she felt these symptoms. She never suffered from bilious attacks, and had not had an attack since she was a child.

Mr. Bennett, tea merchant and tea taster, corroborated. On Tuesday evening he took a very serious view of his wife's condition and desired

Dr. Wishaw to see her on the following morning. When calling on the latter he left with the doctor a piece of linenette, and upon receiving from him his report thereon he called on the defendants and told them to cease selling the material, intimating that he should hold them responsible for the illness of his wife, and should claim damages against them. When at Boscastle, where he went by easy stages, *via* Wells and Launceston, he had to consult another doctor, and had been put to great expense in the matter.

Cross-examined: Dr. Wishaw lived quite opposite witness. He did not ask him to come across earlier because he did not wish to trouble him unnecessarily.

Dr. Reginald Wishaw said Mr. Bennett called upon him on the 12th of May as to his wife's condition. He left a piece of green cloth, which witness gave to Mr Wray, a dispenser, to analyse. On Wednesday he saw the plaintiff, who was seriously ill, very faint, had a dry throat, irritability of the eyes, and complained of pain in the bowels and diarrhœa. He thought she had been poisoned, but kept an open mind on the matter until he received the report of Wray, which stated that the material submitted to him containd arsenic. He then was satisfied that her condition was due to arsenical poison.

Richard Henry Wray said he tested the linenette and found that there was arsenic in it.

Dr. Dyer, Fellow of the Institute of Chemistry, said on the 14th of the month he received from Mr. Bennett a piece of the fabric in question, and testing it discovered it contained arsenic in small quantities, about 1-200th part of a grain to the square foot.

Dr. Thomas Stevenson, lecturer on chemistry and medical jurisprudence at Guy's and analyst to the Home Office, said he had examined the linenette in question, and found that it contained an exceedingly minute quantity of arsenic, about 1-1000th part of a grain per square yard of the fabric, in fact the most delicate test for arsenic did not reveal its presence unless half a square yard was operated on. For all practical purposes the fabric was arsenic free. In his opinion the handling or cutting up or wearing of the fabric would not cause the person dealing with it to be affected.

Arthur Pearson Luff, physician and lecturer on forensic medicine and public health in St. Mary's Hospital, &c., said on September 11, 1896, in the presence of Dr. Wishaw, he examined Mrs. Bennett in order to ascertain whether there was any proof that she had suffered from arsenical poisoning. In answer to questions put by witness, Mrs. Bennett stated that the itching of the eyes did not commence till May 13, whereas if caused by arsenical dust from the linenette this symptom would have commenced on May 11, and that she did not suffer from irritation of the throat or nostrils, which are common symptoms of poisoning by arsenical dust.

J. Hindley, 2, Portland-street, Manchester, said he was the head of the linenette department of Messrs. Barlow and Jones, Limited, spinners and manufacturers He received at the counting-house of the firm a letter from Grant Brothers enclosing a piece of linenette, together with a letter from a customer of Messrs. Grant threatening an action for poisoning. He had the sample analysed by Crace Calvert and Co. In the whole course of his experience in connection with sateens, linenettes, &c., and in handling them he never knew of a case of poisoning resulting therefrom.

Other expert evidence having been given, the Judge, after a lengthy summing up, said there was not the slightest evidence of the plaintiff having been poisoned by the linenette, and there would be a verdict for the defendants, with costs.

GUANO AND THE PERUVIAN CORPORATION, LIMITED.

AT the last meeting of the Peruvian Corporation, Limited, the Chairman (Sir H. Tyler) made a statement as to the future shipments of guano and the Company's relations with the Anglo-Continental Guano Works, Limited. From the information he vouchsafed it appears that the shipments of guano during the financial year resulted in a net profit of £48,645. 13s 4d. The reduction on the year's profits is owing mainly to two causes—(1) the destruction by a tidal wave of the mole at Huanillos on May 30, 1895, and the consequent suspension of shipments from the southern deposits from that date until July 30 following, when the mole had been reconstructed; and (2) a suspension of shipments at the Labos Islands from April 23 to June 25, 1896, in consequence of the loading contractors having found it necessary, in order to facilitate the loading operations, to make a long cutting from the coast to the particular deposit then being worked. The shipments during the past year were made under a contract between the Corporation and the Anglo-Continental Guano Works to terminate the agreement at any time during its currency, by giving to the Corporation three months' notice in writing, and paying, on expiry of the notice, a sum of £25,000. as agreed liquidated damages for cancelling the contract. In accordance with this provision, the Anglo-Continental Guano Works gave notice in writing on May 29, 1896, to terminate the contract, which accordingly expired August 29, and the above sum of £25,000. was in due course paid the Corporation. This amount will form part of the guano revenue the year 1896-97. The contract contained a further stipulation the Corporation should not sell or export, or allow to be shipped exported, any guano from the deposits belonging to or contrilled them until six months after the sailing of the last cargo to be deliv under the agreement. The last cargo to be received by the An Continental Guano Works under their contract was dispatched August 28; so that until March 1, 1897, the Corporation are precl from selling or shipping guano. It was to cover the effects of stipulation that the agreed damages of £25,000. were provided f the contract. In giving the notice terminating their contract Anglo-Continental Guano Works intimated that they had t that step "in consequence of the bad state of agriculture all over world, and the increased competition the Peruvian guano has no contend with through cheap fertilisers and guano from other count which is being sold at very low prices." They further stated that could not continue their contract with the Corporation withou important revision of its terms. The suggestions made by the An Continental Guano Works as a basis for such revision were, how of such a nature as regards both the limited quantity of guano t taken by them annually, and the prices to be paid by them, that a contract with that company was out of the question, as it would seriously curtailed the income of the Corporation from guano. directors, therefore, now propose to make the necessary arrangem at the proper time, for disposing of the guano on a different syste that which has hitherto been adopted.

Selected Correspondence.

SCIENCE, MANUFACTURES, AND PATENTS.

(To the Editor of the Manchester Guardian.)

SIR,—Mr. A. J. Balfour, speaking recently to a Sheffield audie drew public attention to the fact that "the relation between sc and manufacture is not thoroughly grasped" in this country, and attributed to this fact our falling behind foreign manufacturers, their increasing competition and neutral markets. It is well tha has drawn attention to the subject, because anyone of scien intelligence going over mills and works abroad, and comparing t with similar concerns in this country, can see at a glance that only very few instances are we properly equipped for the fight. The re for this is not far to seek. Some of our most intelligent manufactu may know very well that scientific improvements are needed in t mills and works, but while the Patent Law in this country in its pre condition encourages little else than fraud, there is no inducement them to incur the necessary heavy expense of adopting scien improvements. Such expense, they are well aware, can only recouped under cover of valid long-lived patents, and in this cou patents are only one-seventh as valid as they should be for the purp and average less than five years' lifetime, rendering recoupment impossibility. Where you find scientific improvements most introdu into mills and works is in America and in Germany, in both of wh countries patents are valid, long-lived, and cheap, new inventi popular, and recoupment of expenditure easy. Similar conditi are essential in this country before science can find its way gener into our manufactures. No matter what may be the merit a patented invention, it can make no headway in any country unl public opinion is in favour of adopting new inventions. Consider, the fore, from the two following examples whether in America or in Engla patented new inventions are likely to be the most popular. First, America, 40,000 people are given constant employment by the manu facture of sewing machines, originally based on valid 17-year paten costing only £7. each. Secondly, in this city £16,000. was recen lost because our Patent Office takes money for issuing invalid paten and there is no reliance to be placed upon the title of any Engl patent in consequence. Is this the way to make patented inventions popular in this country as in America? Such treatment of enterprisi people is a pure scandal. If there was anything in the patent to inj its validity the Patent Office ought to have eliminated it before taki money to grant the patent, as would have been the case in Americ This effect of the Patent Law in stamping out practical inventio wholesale is very injurious to our trade in many ways, and giv scientific patented inventions no chance of adoption in our mills a works.

The heavy voiding and want of validity in English patents has manufacturers against buying them, and neither they, engineers, n machine makers will give anything for a scientific patented inventio no matter how meritorious. Some of the latter, however, are in t habit of pirating and repatenting in their own name or in that of the clerk the patented inventions of poor scientific men, explained to the

idence The original patentee has no remedy against this action r part, as an action to restrain implies twelvefold costs (vide Lord 1892, "Law Gazette," April, 1892, 9 R.P.C. 116), entirely the reach of a poor inventor. The pirated patent is, of really invalid, but it is worked, and the poor inventor's patent leable and gets voided as he cannot raise the money to pay the l fees. But the injury does not end here, for the man who does uple to take out a pirate patent does not hesitate to ship abroad foreign competitors the newest machinery built under it, and cannot be sold in this country owing to the existing prejudice new inventions That our mills and works should suffer from producers in neutral markets is not very surprising. The Board le is content to see exports increase, swelled by the export of achinery, without caring whether or not unscrupulous men shot my's guns to our detriment. Had not our vicious Patent Law, g after fees, with its invalid titles and ruthless voiding, induced nufacturers to neglect English patents they would have kept the achinery to themselves, as they did prior to 1855, when voiding st its blighting shadow on practical invention in this country ould then have easily beaten down foreign competition when it mmenced, and have kept ahead of it ever since. The prompt on of the American patent system can alone make patented in- is popular in this country so that mills and works will buy and m as in America. In the meantime it will never pay scientific keep manufacturers to the front here as in America until the Law of this country is brought up to date.—Yours, etc ,

A SCIENTIFIC INVENTOR.

MPORTS AND EXPORTS FOR NOVEMBER.

ERE is nothing very startling about the Board of Trade returns or last month. The imports of papermaking materials, manures, llow show a decrease. In the exports all products classed under nicals" show a falling off, as is also the case with soap. The s of paper and seed oil are higher in value and quantity.

IMPORTS OF FOREIGN AND COLONIAL PRODUCE

ARTICLES.		Quantities. 1895.	1896.
rine	Cwt.	88,794	76,896
r Ore and Regulus	Tons.	13,726	12,467
s	,,	50,734	42,493
	Cwt.	86,247	72,356
	,,	17,767	14,652
tone	,,	48,078	56,180
Coal Tar	£.	75,291	65,109
tre	Cwt.	22,035	18,780
eum	Gall.	21,721,489	18,914,067
ntine	Cwt.	33,018	41,823
	Tons.	2,112	687
e of Soda	,,	11,983	8,160
in	,,	89,993	77,104
	Cwt.	60,165	150,605
w and Stearine	,,	249,467	147,976
eed Cake	Tons.	32,077	35,195
Pulp	,,	32,198	25,851

EXPORTS OF BRITISH AND IRISH MANUFACTURES.

ARTICLES.		Quantities. 1895.	1896.
i	Cwt.	644,136	414,780
nt	Tons.	31,469	24,965
and Coke	,,	2,740,165	2,715,375
er, all kinds	Cwt.	111,122	68,619
and Steel	Tons.	253,234	298,972
ical Manures	,,	19,723	17,837
seed	,,	3,982	5,424
	,,	56,304	54,605

TAL PETROLEUM EXPLOSION.—Recently, Mr. E. Docker, er, held an inquest on Ellen Partridge (59), wife of John Part- , Hagley-road, Birmingham, who died from burns. On Monday ng deceased had in her hand a common petroleum lamp She ed the light and it exploded, with the result that the burning oil re to her clothing. Deceased ran outside the house, and neigh- went to her assistance, but before the flames were extinguished ad sustained shocking burns about the body. Dr. Young was d in, but she expired on the following night. The jury returned a ct of "Accidental death."

Trade Notes.

REVIVAL IN THE CHESHIRE CHEMICAL TRADE.—On Saturday last Messrs. Brunner, Mond, and Company's chemical employés at Northwich, who during the depression have been losing a shift weekly, resumed full time. There is a marked improvement in the trade, and prospects are brighter than for some time past.

REPORTED DISCOVERY OF COAL NEAR SOUTHAMPTON.—It is reported from Portsmouth that some workmen who were sinking a well at Pear Tree Green, near Southampton Water, discovered what is believed to be a seam of coal. It is stated to be 18in. in thickness, and specimens have been forwarded to experts in London for examination.

THE SULPHIDE CORPORATION LIMITED.—At an extraordinary general meeting held last week the resolution passed at the extraordinary general meeting held on Novembe· 24th, 1896:—"That the capital of the company be increased to £1,100,000. by the creation of 50,000 new preference shares of £1. each and 50,000 new ordinary shares of £1. each, such new preference shares ranking pari passu in all respects with the 500,000 existing preference shares, and such new ordinary shares with the ordinary shares of the company," was duly confirmed.

SERIOUS FIRE AT STOURBRIDGE.—The flour mills of Messrs. Edward Webb and Son, the well-known seedsmen, near Stourbridge, and Mr. Thomas Guest's glass decorating works, were involved last week in a fire causing several thousand pounds loss. Four four-storey buildings and their contents were completely destroyed, and an adjoining mill was saved with difficulty. The fire was remote from the seed warehouses. Messrs. Webb were insured, but not the occupier of the glassworks.

LAMP DANGERS IN COAL MINES.—Mr. Chester Jones, barrister, in his report to the Board of Trade upon the explosion, involving the loss of seven lives, which occurred in August at Bryncock Colliery, near Neath, says the disaster was caused by the firing of an imperfectly protected Davy lamp, and that there is considerable warrant for inferring that the lamp was carried by one David Meyrick, whose lamp was the only one that showed signs of burning on the gauze. Mr. Jones adds that Mr. Robson, Her Majesty's inspector of mines, holds the opinion that these partially protected lamps are not safe to be used in any mine and that he (Mr. Robson) never carries one himself into a mine.

FATAL EXPLOSION AT A MATCH FACTORY.—An explosion occurred on Tuesday evening at Cromer's match factory, at Aschaffenburg, Bavaria, destroying the entire building. The loss of life proves to have been much greater than at first expected. Fifteen women and girls engaged in the main building are all dead, eight having been killed on the spot, and the remaining seven having since died in the hospital. Of the seven girls engaged in an adjoining room one was fatally injured, and others are more or less severely hurt. There were three men in the factory, of whom one was killed, and the other two seriously injured. Not a single person in the main building escaped alive.

SAVING LIFE AT COLLIERY EXPLOSIONS.—At a meeting of the Manchester branch of the National Association of Colliery Managers, held in the rooms of the Manchester Geological Society on Friday evening, last week, Mr. G. H. Winstanley, of the Wigan Mining School, exhibited and described the Fleuss apparatus for saving life in coal mines after explosions of gas or coal dust, and for working generally in poisonous and irrespirable gases There was a good attendance of colliery managers The President (Mr. Robert Winstanley) occupied the chair, and Messrs. Saint and Harrison, Her Majesty's inspectors of mines for this district, were also present The lecture was illustrated by means of lime-light views explaining the action of the Fleuss apparatus, manipulated by Mr. R E. Grime, who also, after the lecture, harnessed the apparatus upon himself in order to demonstrate exactly its use and how it is worn. It consists of a mask fitting closely to the face covering the mouth and nose, a flat inda-rubber bag worn in front, and a small cylinder containing oxygen gas strapped to the back. This appliance makes it possible for a person to enter and remain for about three or four hours in an atmosphere charged with the most poisonous gases Mr. Winstanley pointed out that the lives lost in a colliery explosion are not so much due to the explosion itself as to the effect of the poisonous gases with which the atmosphere is charged. Under the influence of these gases the miners become insensible, and if they could be rescued immediately their lives might be saved; but it generally happened that the rescue party were driven back by the gases, and had to wait until the ventilation was restored. It was suggested that several sets of the apparatus be kept at convenient stations in all colliery districts. Volunteers could be trained in the use of the apparatus, and in this way a trained rescue party would always be in readiness, prepared to render valuable assistance more promptly than was generally the case in the event of a colliery explosion.

COMBINED IODINE IN THE BODY.—It has been recently discovered that iodine exists in combination in the human body. It occurs in the thyroid gland, and may be considered as the essential chemical substance in the internal secretion of the gland. The proof of the occurrence of iodine in the living structures of animals is of great scientific interest and importance, and is the most remarkable discovery made in chemical physiology for some time.

PUBLIC SEWERS AND MANUFACTURERS' EFFLUENTS.—The Oswaldtwistle District Council on Thursday decided to appeal against Mr. Justice Charles's recent decision in the Queen's Bench Division, in which his Lordship ruled that Messrs. Peebles, Limited, paper makers, White Ash Mill, Oswaldtwistle, were entitled to turn their trade effluent into the sewers of the local authority. The point is of the greatest importance to manufacturers and local authorities, and the result of the appeal will be awaited with great interest.

PRACTICAL APPLICATION OF THE "X" RAYS.—The new photography has recently been successfully applied by Dr. Marsh, of Northwich. For over two months a boy named Drinkwater, aged seven years, has complained of severe pain near the chest. He has asserted over and over again that something was sticking, and he had great difficulty in swallowing. He was examined by two doctors, who gave it as their opinion that it was impossible for anything to have lodged for such a length of time in the region indicated. The boy's health became worse, and it was determined to try the rays. The first experiment revealed a halfpenny embedded in the gullet. The coin on removal was found to be black and corroded, and it is certain that had it remained much longer the boy's life would have been sacrificed.

A REVIVAL OF SUSSEX IRONWORKS.—In view of the development of the coalfield at Dover, the *Dover Standard* states, the re-establishment of ironworks on a large scale in Sussex is contemplated. Iron ore is found plentifully in Sussex, which until the year 1720 was the principal centre of iron manufacture in England, the iron rails round St. Paul's Cathedral having been cast in Sussex. The last furnace in Sussex was extinguished at Ashburnham in the year 1828. The fuel used for the smelting was wood; but the county became denuded of timber, in consequence of which Acts of Parliament were passed prohibiting the furnaces. It has only been the question of the price of coal which has prevented the iron ore being worked in Sussex. In the time of the Romans iron was smelted there.

THE VALUE OF MINERALS PRODUCED IN THE UNITED KINGDOM.—The total value of all the minerals produced in the United Kingdom in 1895 was £69,129,664., as compared with £77,898,938. in the previous year, or a decrease of no less than £8,769,274. The value of coal alone fell from £62,730,179. in 1894 to £57,228,213. in 1895, a decrease of over £5,000,000., although the output was 189,661,362 tons last year, as compared with 188,277,525 tons in the previous year, or an increase of 1,383,837 tons. The output of anthracite was 2,072,210 tons, the largest on record. In Lancashire alone there were last year 22,014,515 tons of coal produced, these figures marking a decrease of 1,111,468 tons as compared with the preceding year. The approximate price per ton at the mines was 6s. 5d., and the gross value £7,059,782., as compared with £7,973,302. for Durham, and £7,318,556. for Yorkshire. The gross value of coal raised in England was £30,488,435, and the gross tonnage 132,760,636, or a decrease of 5,566,788 tons, the average price of coal throughout the country being 5s. 11·38d.

FELLING A CHIMNEY STACK.—Hundreds of people assembled recently at Bedworth on points of vantage not far from the Bedworth Railway Station to witness the felling of a large chimney-stack, which had stood there for a quarter of a century. It was erected originally for Messrs. Addenbrook and Co.'s ironworks. Standing 160ft. high, with a base of about 21ft. square, it contained about a million bricks, and weighing about 3,000 tons, the top being 11ft. in diameter on the inside. An opening had been cut in the base of the structure through about 6 ft. of brick, which, with another opening that already existed left that side of the stack standing on two 6ft. by 5ft. pillars. Nine holes were drilled and each was charged with about 2lb of dynamite, and subsequently the time-fuses were simultaneously started. Some four or five shots were the first to go off with a loud report, but the massive chimney did not show the slightest sign of a shock, beyond the belching forth of a great cloud of dust at the base, until the remainder of the shots went off together with a great noise. Without any perceptible vibration, the chimney began to slowly topple over, it going a third of the way with amazing steadiness. Then it broke in two, and came down with a crash, taking exactly the line that was intended, leaving all the bricks in a perfectly sound condition, and tearing the base of the stack from the ground, like some giant oak, uprooted by a hurricane. Not the slightest damage was done to anything else, and even the solitary unsupported face of an engine-house a few yards away was unaffected.

NOTICES.

LONDON AGENTS

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On usual trade terms.

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Owing to the inconvenience created by the various ways in whi foreign subscriptions are remitted, we respectfully beg to infor subscribers that a *Crossed* MONEY ORDER is the most satisfacto method of remitting, both for them and ourselves. In the case of Money Order, a letter advising us of same should always be sen otherwise, owing to post-office formalities, much delay in tracing an acknowledging foreign remittances is inevitably entailed in this countr

Market Reports.

TAR AND AMMONIA PRODUCTS.

The market is quiet. Benzols are lower, 90's now standi nominally at 2s. 9d., and 50/90's 2s 6d. prompt. Carbolic ac keep firm, with a somewhat anomalous relation between 60% cr and 40% crystals, the respective quotations for which are still 2s. and 7½d. Solvent naphtha is steady at 1s. 7d., and crude at 1s. Creosote firm. Anthracene nominal, at 9d. to 10d. for 30% A, a 7½d to 8½d. for B. Pitch ranges from 25s. to 28s. f.o.b. E Coast.

Sulphate of ammonia is steadier, and prices generally are firmer. Liverpool and Hull the improvement in price is not so marked, but a whole the tone of the market is certainly healthier. Prices are London outside makes, £7. 12s. 6d.; Liverpool, £7. 8s. 9d.; Ha £7. 8s. 9d. to £7. 10s.; Leith, £7. 10s. At Hull a stand is bei made for £7. 10s. for January delivery.

REPORT ON MANURE MATERIAL.

The market has been quiet throughout the week, and values rem practically unchanged. Quotations for mineral phosphates are as l reported. Business is reported on the Continent, but United Kingd buyers remain indifferent. There is inquiry for River Plate bones, a there would be buyers at £3. 17s. 6d. for shipment up to the end the year, but at the moment there are no cargoes offering in th position. For December-January and January-February there a sellers at £3. 18s. 9d. per ton, but buyers do not look at these so lo as they think there is any chance of getting earlier shipment. Boile bone meal is still offering at £3. 17s. 6d. per ton, ex quay Liverpo without finding buyers. Nitrate of soda is quiet, but fairly steady 7s. 10½d. per cwt. for ordinary, and 8s. for fine quality, on spo Due cargoes have been more freely offered, and 7s. 9d. per cwt. is n full value.

MISCELLANEOUS CHEMICAL MARKET.

In the alkali trade business is fairly brisk on the whole, and there especially a good demand for caustic soda and bleaching powder f this month's shipment to the United States. Prices for caustic so are unchanged, both for prompt and forward delivery, and curre quotations for prompt are as follows—f.o.b. Liverpool, 77%, £9.; 74 £8.; 70%, £7. 2s 6d.; 60%, £6. 2s. 6d. nett per ton, 10-ton lo and upwards. Ammonia alkali unaltered at £3. 7s. 6d. per ton, bag f.o.r., and firm for prompt delivery, but only small amount of busine reported on forward contracts. The export trade in this article sho no improvement in value or quantity. Soda crystals are witho change. Bleaching powder firm for prompt delivery at £6. 10s., for softwoods, and £6. 15s. hardwoods, f.o.b. Liverpool and other por Chlorates of potash at 4d., and soda at 5d., are firmer for early deliver but forward business is being done at lower rates. Recovered sulph maintains a firm position, both prompt and forward, at £4. 12s. 6d. £4. 15s. f.o.r. Sulphate of copper dearer at £17. 5s. to £17. 10 f.o.b. Acetate of lime is in rather a stronger position, both in brow and grey, at £4. 15s and £8. 10s. per ton respectively in Manches district, 5s. less at other ports. Other acetates remain quiet and u changed in value. For white powdered arsenic there is still a stea demand, and with only limited supply price is firmly held at £24. prompt and early shipment. Potash, caustic and carbonate, conti in good request, and prices are unchanged. Cyanide, 98/99%, 11d. 1s. per lb. Yellow prussiate of potash dull—price 5½d. to 5¾d. per

THE METAL MARKETS.

NDON, WEDNESDAY.—Pig iron: Scotch warrants closed at ½d., Middlesbrough 40s. 2d. cash, and hematite 50s. 3d. r, easier: Chili bars, G. O. B.'s and G. M. B's., closed at 10s. to £48. 15s. cash, and £49. 2s. 6d. to £49 7s. 6d. months. Tin, quiet: Straits closed at £57. 15s. to 5s. cash, and £58. 12s. 6d. to £59. 2s. 6d. three months; lian, £59. 10s. 0d.; English ingots, £62. 10s. 0d. Lead: h, £11. 11s. 3d; English, £11. 15s. Silesian spelter, ry, £17. 10s. Nickel, 1s. 2½d. Antimony, £30. to £31. ilver: First hands, £6. 12s. 6d.; second hands, £6. 10s. *shares*, quiet: Cape, 2⅜ to 2½; Copiapo, 1 11/16 to 1 13/16; 1, 1⅜ to 1¾; Mason and Barry, 2½ to 2¾; Rio Tinto, 24⅞; Tharsis, 5¼ to 6.

ASGOW, WEDNESDAY.—Market steady, and a fair business. done at 48s. 2d., 48s. 1½d., 48s. 2½d., and 48s. 2d. cash; 48s. 5d., 48s. 5½d., and 48s. 5d. one month; buyers, 48s. 1½d. sellers, 48s 2d. Cleveland, buyers, 40s. 2d. cash; sellers, ½d. Cumberland hematite done at 50s. 2½d. and 50s. 3¼d. cash; 50s. 3d. cash; sellers, ½d. more. Middlesbrough hematite, 48s. 6d. cash; sellers, 48s. 7d.

IVERPOOL OIL AND COLOUR MARKET.

WEDNESDAY.

S.—There has been more doing in palm oil, the inquiry being good. Sales have been made on spot at £21., including Lagos, bsequent Lagos has been done at £21. 5s. Benin has sold at 15s., all transit. Olive is rather quieter, and only a limited ss is doing. Linseed is steady, and a shade firmer in price, ool makes in export casks now being quoted 16s. 6d. to 17s. 6d. rt. Cottonseed oil is perhaps a little steadier, but prices for ool refined still stand at 15s. 9d. to 16s 3d. per cwt.; American, l. Castor oil is quiet in all sections, but there is nothing fresh rt as to prices, which remain 3¾d. for good seconds Calcutta, ¼d. for first pressure French. Tallow is very steady, the market trong. Resin is moving satisfactorily, the spot demand being at prices which show no signs of abatement. Spirits of ine continue about the same, there being a moderate spot s doing at 21s. per cwt. Petroleum is quiet, with American at o 7¾d., and Russian refined 5¾d. per gallon.

OURS.—Prices are steady, and practically without change. : Oxfordshire, common, £10., medium, £12., best, £15, hire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, econds, 50s., and common, 18s.; Irish, Devonshire, 40s. to French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. ad unchanged. Venetian red, £6. to £10. Cobalt: Pre- oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, edium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

chemical industry as a whole seems to become more and more d with every week that passes, and if recovery is in the near at all it cannot at least be looked for until the Christmas and Year dislocation has been got over. The report of chemicals also e of a blank than usual at this particular crisis of the year, the being practically closed by the winter ice, and the ports still ampered with other less material causes. The labour war at urg, for instance, is felt here as bearing heavily on sulphate of nia, which article is deader than ever to-day. Nobody cares to stock with it, even at the very low prices which some of the s are in the necessity of accepting. So low as £7. 2s. 6d. prompt, is spoken of, though this is probably an exceptional concession. s' views as to forward are breaking down too, but so far without g business. Mineral oils and solid paraffins unchanged, except s with regard to lubricants, which ease off a little for the holidays. f prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; h, 48/52°, £4. 2s. 6d. to £4. 7s. 6d. nett, Tyne; white alkali, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. lasgow; caustic soda, white, 74° £8., 70/72° £7. 2s 6d, 60/62° . 6d., and cream 60/62° £6., all nett, Liverpool; bleaching , £6. 12s. 6d. nett, Tyne; saltcake, 21s.; borax, English, , £20., and boracic acid, £30. nett, Glasgow; bicarbonate of -cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; nate of potash, 4½d. nett, for Scotch and English deliveries (for 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); e of potash, 4d. less 5%, any port: nitrate of soda, 7s 10½d. d.; sulphate of ammonia, £7. 2s. 6d. to £7. 7s. 6d. prompt, f.o.b. Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £17. 10s. to £17. 15s. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¼d., and soft, 1½d. to 1⅝d. per lb.; paraffin wax, 120° semi-refined, 1 15/16d. to 2⅛d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch buyers (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. Week's imports of sugar at Greenock were 11,500 bags beet unrefined.

TYNE CHEMICAL REPORT.

TUESDAY.

There is no alteration to report in prices, the demand is only very slow as usual at this time of the year. Caustic soda, 76/77%, £9. per ton; and 70%, £7. 10s. per ton. Bleaching powder, £6. 10s. to £7. per ton. Sulphur scarce at £5 to £5 5s. per ton.

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. per ton, nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s. 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw., £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett; chloride of barium, refined crystals, £6. 15s. per ton, nett; do., 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett; carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. per ton, f.o.b Tees.

COALS.—There is a much steadier and better demand for all classes of coals. Gas coals are in full consumption. Coke is very firm, and increasing in production. To-day's prices are:—Best Northumbrian steam, 7s 9d. to 8s. per ton; second qualities, 7s. to 7s. 6d. per ton; small steam, 3s. 6d. to 4s. per ton. Gas coals, 6s. 9d. to 7s. per ton Bunker coals, 6s. 6d. to 7s. per ton. Household coals, 10s. to 11s. Coke very firm, 14s. to 15s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—The demand remains restricted. Cotton oil remains flat, and linseed oil has improved by about 7s. 6d. per ton. The principal imports compared with the same time a year ago have been to date for the present year:—Linseed, 878,557 quarters, against 683 818 quarters; rapeseed, 91,407 quarters, against 148,559 quarters; cottonseed, 169,832 tons, against 181,739 tons; olive oil, 16,940 casks, against 12,266 casks; rape oil, 4,608 casks, against 7,416 casks; oilcakes, 11,939 tons, against 16,839 tons; tallow, 69,589 cwts, against 15,107 cwts.; bones, 5,101 tons, against 3,598 tons; turpentine, 15,459 barrels, against 18,105 barrels. Linseed oil has improved about 7s 6d. per ton, closing steady at 14s. 7½d., naked spot; month, 14s. 9d.; and January-April, 15s. 3d. to 15s. 6d.; May-August, 16s.; boiled and refined, from £1. 10 £1. 10s. per ton extra. Export for the week has been 820 cwts. Refined cotton oil about 5s. per ton lower, closing at 12s. 10½d., naked spot; January-April offer at 13s 7½d.; casks £1. and ordinary barrels £1. 10s. per ton extra. Export for the week has been 3,560 cwts Olive oil from £31. to £35. per tun. Cod oil 16s. to 19s.; castor oil firm and unchanged. Brown wool grease firm and scarce, £9. to £10. per ton. Olive oil soap, 60% fatty acids, £17. 10s per ton, c.i.f. Hull.

CAKES.—Linseed cakes quiet; 95% pure, £6. 2s. 6d. to £6 7s. 6d. per ton. Oilcakes, £5. 7s. 6d to £5. 10s. Cotton cakes dull, inclining lower, £3. 17s. 6d. being accepted; and December-March, £3 12s. 6d. Rape cakes unchanged.

PAINTS.—For the home trade the demand is limited, still there are some useful inquiries about for next year's contracts and export requirements, which no doubt will be strongly competed for. White and red leads unchanged, but quoted firmer for forward. Ready mixed paints are offered from £23 per ton in lever tins of 1, 2, 4, and 7lb. tins. Ultramarines from 3d. to 8d. per lb. Black, blue, red oxide, venetian red, green and yellow ochre paints from £10. 10s. per ton. Paint remover 25s. per cwt. Imperial black varnish, £5. 10s. in barrels. Oak varnish 5s. 6d. per gallon.

New Companies.

Anglo-Hungarian Seed Crushing Co., Ltd.—CAPITAL £50,000., in 49,500 ordinary shares of £1. each and 100 founders' shares of £5. This company has been formed to carry on the business of seed crushers and oil manufacturers under a concession from the Aust.-Hung. Government. The subscribers to the memorandum of association are:—F. M. Jackson, 22, Parliament-street, Hull, solicitor; J. C. Thompson, Perth House, Hull, engineer; H. F. Pudsey, 6, Crown-terrace, Hull, gentleman; H. H. Briggs, 5, Crown-terrace, Hull, shipowner; W. S. Wright, 63, Fenchurch-street, E.C., broker; O. K. Dibb, 24, Old Square, Lincoln's Inn, barrister; P. Usher, 38, Connaught-road, Stroud Green, N., accountant.

Maypole Co., Ltd—CAPITAL £200,000., in £1. shares of which 50,000 are 7% cumulative preference. This company has been formed to exploit the American and foreign patents for the manufacture of Maypole soap, etc. The subscribers to the memorandum of association are:—H. H. Chaston, 18, Ruvigny Gardens, Putney, merchant; G. E. Norman, Bohemia Place, Mare-street, Hackney, clerk; L. Sydenham, 3, Windsor Villas, East Dulwich, bookkeeper; H. Peterken, 11, Agnes-street, Burdett-road, E., bookkeeper; E. C. Boyce, 9, Clarendon-road, Putney, clerk; H. H. Howe, 116, Clifton-crescent, Asylum-road, S.E., contractor; R. P. Bissmire, 39, Hubert-crescent, Clapham, manager.

Kay and Wilkinson, Ltd.—CAPITAL £10,000., in £5. shares of which 610 are 5% cumulative preference. This company has been formed to acquire the tanning, etc., business carried on by Messrs. Kay and Wilkinson at Bury, Lancashire. The subscribers to the memorandum of association are:—S. Kay, Richard Birch-street, Bury, leather currier; H. E. Wilkinson, 188, Walmersley-road, Bury, leather currier; Mrs. M. J. Kay, Richard Birch-street, Bury; J. Kay, Richard Birch-street, Bury, currier; Mrs. M. Wilkinson, 188, Walmersley-road, Bury; Miss E M. Wilkinson, 52, Sheriff-street, Rochdale; Miss E. Wilkinson, 52, Sheriff-street, Rochdale.

IMPORTS OF CHEMICAL PRODUCTS
AT
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 5th,

Acetate of Lime—
U. States, 480 bgs. J. R. Francis & Co.

Acetic Acid—
Holland, 70 pks. Little & Johnston
" 111 A. & M. Zimmermann
" 50 R. W. Greeff & Co.

Alkali—
France, 40 c. J. Barber & Co.
Holland, 7 "

Alum—
Holland, 136 cks. Ohlenschlager Brs.

Ammonium Chloride—
Holland, 9 cks. H. Lorenz

Anthracene—
Holland, 80 cks. Burt, Boulton & Co.
Spain, 217 cks. "

Antimony Ore—
Sydney, 4 t. L. & I. D. Jt. Co.

Asbestos—
Italy, £780 J. Barber & Co.
" 235 Brit. Asbestos Co.
" 600 Pickford & Co.
Canada, 144 W. Byford

Barium Chlorate—
Holland, 22 cks. Petri Brs.

Barytes—
Germany, 51 cks. W. Harrison & Co.
Belgium, 34 "
Holland, 59 J. L. Lyon & Co.
" 110 W. Harrison & Co.
" 20 B. & F. Wf. Co.
" 23 O'Hara & Hoar
Belgium, 53 pks. J. L. Lyon & Co.

Bleaching Powder—
Holland, 33 cks. J. M. Steel & Co.

Camphor—
Germany, 199 cs. R. Warner & Co.

Caoutchouc—
France, 26 c. H. Johnson & Sons
Penang, 155 E. Boustead & Co.
Germany, 50 T. H. Lee
France, 31 Prop. Hay's Wf.
P. E. Africa, 9 Manica Trading Co.
Ceylon, 45 Hoare, Wilson & Co.
Belgium, 2 Société John Cockerill
Singapore, 616 L. & I. D. Jt. Co.
Madagascar, 20 Procter Brs.
" 38 L. & I. D. Jt. Co.
Holland, 100 J. Barber & Co.
France, 20 Prop. Bull Wf.
E. Indies, 29 Ralli Brs.
Zanzibar, 4 L. & I. D. Jt. Co.
P. E. Africa, 10 "
Rangoon, 108 "
Singapore, 285 Anderson, Weber & Co.

Castor Oil—
Italy, 10 cs. Beresford & Co.
France, 3 W. G. Frith & Co.
E. Indies, 100 R. G. Hall & Co
" 31 cks. Ross & Deering
Italy 20 A. & M. Zimmermann
France, 50 brls. Snowdon Sons & Co.
" 91 Lucas & Spencer's Wf., Ld.
" 12 Price's Patent Candle Co.
" 88 R. G. Hall & Co.
" 8 Anderson, Weber & Smith
" 30 J. T. Morton
" 58 pks. F. Boehm
" 152 C. Windschuegl & Co.
Italy, 30 Fuerst Brs.
France, 44 Mordaunt Brs.

Caustic Potash—
Germany, 5 cs. Gellatly, Hankey & Co.
" 20 drs. F. W. Berk & Co.
" 5 Blondeau & Co.
France, 102 c. W. E. Cole

Chemicals *(otherwise undescribed)*
France, £24 Mory & Co.
Germany, 19 T. Palmer
Holland, 30 H. Lorenz
" 25 Typke & King
Germany, 25 L. & I. D. Jt. Co.
Belgium, 90 Société John Cockerill
Germany, 30 T. H. Lee
China, 210 P. & O. Co.
Germany, 14 J. Wittenhagen
" 300 A. & M. Zimmermann
U. States, 170 E. E. Baile
" 820 F. Parker
Holland, 220 J. Barber & Co.
" 12 A. & M. Zimmermann
France, 60 A. Carey
Holland, 19 J. Parlevliet
" 125 Phillipps & Graves
Belgium, 1,248 A. & M. Zimmermann

Cream of Tartar—
France, 3 cks. Evans, Lescher & Co.
Italy, 7 Thames S. T. & L. Co.
France, 21 B. & F. Wf. Co.
" 24 W. C. Bacon & Co.
" 5 M. Ashby, Ld.

Dextrine—
Germany, 100 bgs. W. Balchin
" 6 J. Barber & Co.

Dyestuffs—
Annatto
Holland, 2 cks. Balfour & Co.
Argols
Italy, 14 cs. 26 cks. Thames S. T. & L. Co., Ld.
Cochineal
Canaries, 35 bgs. Swanston & Co.
" 18 J. W. Borland
" 12 W. M. Smith & Sons
" 40 Sperling & Williams
Cutch
Rangoon, 850 bxs. A. Howden & Co.
" 2,000 Arracan Co.
Ceylon, 200 cs. Cayzer, Irvine & Co.
Rangoon, 300 Hoare, Wilson & Co.
Singap're, 1,175 J. Swire & Sons
" 100 H. Johnson & Sons
Extracts
France, 10 cks. J. Harrison
Holland 15 R. Baelz & Co.
U. States, 303 pks. Williams, Torrey & Co.
" 150 bxs. Skilbeck Brs.
Belgium, 30 cks. L. J. Levinstein & Sons
France, 30 brls. Union L. Co.
" 30 Beresford & Co.
Gambier
Singapore, 152 bgs. 494 bls. E. Boustead & Co.
" 452 G. R Haller
Germany, 117 Beresford & Co.
Indigo
E. Indies, 5 chts. Eales, Prince & Co.
Spain, 7 J. Hatton Hall & Co.
E. Indies, 58 L. & I. D Jt. Co.
" 11 Binny & Co.
" 10 J. Hatton Hall & Co.
" 26 Parsons & Keith
Madder
Holland, 2 cks. Flack, Stagg & Co
Orchella
E. Indies, 50 bls. Beresford & Co.
Shumac
Italy, 1,750 bgs. Beresford & Co.
" 210 R. Waters
" 100 Harris Brs. & Co.
" 50 Nich.'s Wvs. Co.
Tanners' Bark
Natal, 98 t. A. & W. Nesbitt
Valonia
A. Turkey, 70 t. A. & W. Nesbitt
" 12 W. H. Mitchell

Farina—
U. States, 200 bgs. R. Bennett & Co.
Germany, 10 "
Holland, 4 "
" 50 J. Knill & Co.

French Chalk—
Italy, 30 t. W. Harrison & Co.
France, 10 G. G. Blackwell

Glucose—
U. States, 100 pks. 600 c. T. J. Lipton
" 80 280 Page, Son, & East
" 650 1,349 Ohlenschlager Brs.
" 50 284 J. Keiller & Son
" 500 500 Knowles & Padgett
" 500 500 G. Clark & Son
" 400 400 Deering & Robottom
" 400 400 Fellows, Morton, & Co.
" 100 600 Union L. Co.
" 50 275 Craven & Co.
" 200 1,000 E. & T. Pink
" 990 1,830 L. Norman & Co., Ltd.
Germany, 65 600 Bennett S. S. Co.
" 85 202 M. D. Co.
U. States, 500 500 Robinson, Son, & Co.
" 3,249 5,842 R. G. Hall & Co.

Glue—
Belgium, £184 J. Barber & Co.
U. States, 52 Armour & Co.
France, 90 E. Fischel & Co.
Belgium, 45 C. J. Capes & Co.
Germany, 60 Andersen, Becker, & Co.
" 19 T. H. Lee
Holland, 8 G. Kahn & Co.
Belgium, 37 Sawer, Sons, & Co.

Infusorial Earth—
Norway, £65 W. M. Smith & Son
Melbourne, 100 L. & N.-W. Rly.

Lamp Black—
U. States, 165 pks. W. Cawdery & Co.
" 50 brls. L. & I. D. Jt. Co.
Sweden, 180 cs. Pinchin, Johnson, & Co.

Lead Acetate—
Germany, 14 cks. R. W. Greeff & Co.

Litharge—
Holland, 3 cks. J. Barber & Co.
" 15 J. Owen

Lithopone—
Holland, 20 cks. D. Storer & Son

Manganese—
Germany, 22 t. H Johnson & Son

Manure—
Belgium, 10 t. Chemical Works

Methyl Alcohol—
U. States, 50 brls. Stein Bri.

Mica—
E. Indies, £645 E. Davis & Co.
Canada, 30 H. & G. Duthie
Ceylon, 210 E. David & Co.
" 131 L. & I. D. Jt. Co.
E. Indies, 50 Arbuthnot, Latham, & Co.
" 3,140 W. M. Smith & Son
" 535 Ross & Deering

Naphtha—
Spain, 58 brls. Burt, Boulton & Co.

Naphthaline—
Germany, 4 cks. T. H. Lee

Ochre—
France, 60 cks. T. Cartwright
Holland, 8 pks. Phillipps & Green

Phosphate Rock—
France, 130 t. A. Hunter & Co.
Holland, 210 Lawes Chemical Manure Co.
France, 250 "

Pitch—
Holland, 3 brls. Abbey, Abbey & Co.

Plumbago—
Ceylon, 65 cks. J. Swire & Sons
" 85 Denham & Co.
" 837 J. Threlfall, Son, & Co.
Norway, 4 T. H. Lee
" 46 R. Galloway

Potash—
Canada, 169 c. Charles & Fox
Potassium Carbonate—
Germany, 105 c. Petri Brs.
France, 219 W. E. Cole
Potassium Cyanide—
Holland, 15 cs. F. Boehm
Potassium Oxymuriate—
Sweden, 20 kgs. G. Boor & Co.
Pyrites—
Portugal, 1,720 t. C. L. Vasey & Co.
Quicksilver—
Spain, 109 btls. H. J. Enthoven & Son
Rosin—
France, 20 brls. Lucas & Spencer's Wf.
Rosin Oil—
France, 100 brls. Fleming's Oil & Chemical Co.
" 100 C. Price & Co.
Saltpetre—
Germany, 122 cks. 27 pks. P. Hecker & Co.
E. Indies, 3,968 bgs. Perkins & Homer
" 225 Lucas & Spencer's Wf.
Soda—
Germany, 4,100 c. R. Waters
Belgium, 1,400 "
Sodium (Metal)—
Belgium, 37 cs. A. C. Lloyd
Sodium Acetate—
France, 3 cks. J. Harrison
Belgium, 100 "
Sodium Hyposulphite—
Holland, 58 cks. J. Owen
Starch—
Germany, 400 cs. C. Tennant, Sons, & Co.
" c Phillipps & Graves
Belgium, 159 T. H. Lee
" 180 Leach & Co.
Holland, 1,200 Vokins & Co.
U. States, 325 pks. Beck & Pollitzer
" 50 bgs. R. Bennett & Co.
France, 200 cs. Prpts. Dowgate Dk.
Holland, 1,462 Little & Johnston
Belgium, 785 F. Claydon & Co.
Germany, 1,180 Horne & Co.
" 300 pks. Seaward Brs.
" 6 cks. T. H. Lee
Stearine—
France, 100 bgs. Bennett S. S. Co.
" 120 H. Walbaum & Tosetti
" 139 H. Hill & Sons
Belgium, 3 cks. Schenker & Co.
Denmark, 16 Bailey & Leetham
U. States, 6 L. & I. D. Jt. Co.
Belgium, 317 bgs. H. Hill & Sons
" 63 C. S. Lovell
Sulphur—
Italy, 20 t. C. Tennant, Sons, & Co.
" 16 F. C. Devon & Co.
" 70 G. Boor & Co.
" 50 W. C. Bacon & Co.
" 105 Johnson & Hooper
" 5 J. Puddy & Co.
Talc—
France, £40 G. G. Blackwell, Sons, & Co.
Tartaric Acid—
Holland, 30 cks. 12 pks. B. & F. Wf. Co.
Ultramarine—
Holland, 4 pks. J. Barber & Co.
" 20 cks. 15 cs. Hernu, Peron, & Co.
" 5 W. Harrison & Co.
" 3 cs. Haeffner, Hilpert, & Co.
Germany, 4 33 Steinhoff, Sons, & Co.
Varnish—
U. States, 22 pks. Lunham & Moore
" 10 Pinchin, Johnson, & Co.
Germany, 2 L. & I. D. Jt. Co.
U. States, 10 Wilson's & Furness Co.
White Lead—
Holland, 42 cks. T. & W. Farmiloe
" 20 E. J. Diggins
" 12 A. Zumbeck & Co.
" 44 Spies Brs. & Co.
" 12 Phillipps & Graves
Germany, 24 D. Storer & Sons
Holland, 27 F. G. Clifford
" 10 Blundell, Spence, & Co.
Belgium, 19 Perkins & Homer
Germany, 27 W. A. Rose & Co.
" 3 H. Keller & Co.

Wood Pulp—
Sweden, 240 pks. W. G. Taylor & Co.
Holland, 268 G. Rahn & Co.
Sweden, 136 W. D. Cork
" 4,320 Tough & Henderson
" 800 E. J. & W. Goldsmith
Norway, 205 40 bls. Johnsen & Jorgensen
" 1,158 W. E. Bott & Co.
" 200 Christophersen, Andrews, & Co.
Belgium, 765 E. J. & W. Goldsmith
Holland, 270 Phillipps & Graves
Norway, 246 W. G. Taylor & Co.
Holland, 33 Thames S. T. & L. Co.
Zinc Oxide—
Germany, 77 brls. M. Ashby, Ltd.
Holland, 24 cks. R. Bew
" 5 brls. Beck & Pollitzer
" 215 M. Ashby Ltd.
Germany, 500 Soundy & Sons
Holland, 28 cks. J. Matton
" 20 Spies Brs. & Co.
Zinc White—
Holland, 500 cks. Soundy & Sons
" 50 Burrell & Co

LIVERPOOL.

Week ending December 3rd.

Acetic Acid—
Rotterdam, 4 cks.
Alum Cake—
Rotterdam, 53 cks.
Alumina Hydrate—
Antwerp, 6 cks. J. T. Fletcher & Co.
Aluminous Cake—
Rotterdam, 42 cks.
Barytes—
Antwerp, 18 cks. 50 bgs.
Bone Ash—
Zarate, 835 bgs. J. Nelson & Sons
Borax—
Hamburg, 1 brl.
Antwerp, 26 crts. 50 bgs.
Caoutchouc—
Havre, 70 sks.
Valparaiso, 60 bls. Kleinwort, Sons & Co.
Las Palmas, 4 bgs. Canary Isld. Trading Co.
" 4 Klop, Kullman & Co.
Castor Oil—
Leghorn, 35 cs.
Chemicals *(otherwise undescribed)*
Rotterdam, 1 cs.
Hamburg, 10 cks.
Cod Oil—
Halifax, N.S., 10 cks. J. Martin & Sons
St. John's, N'fld., 50 J. J. Langley
Colours—
Antwerp, 1 cs.
Bordeaux, 1
Cottonseed Oil—
New York, 110 brls.
Rotterdam, 12
Cream of Tartar—
Tarragona, 2 pps.
" 5 Sachse & Klemm
Oporto, 5 cks. Baird Brs.
Cryolith—
Hamburg, 2 cks.
Dextrine—
Rotterdam, 5 bgs.
Dyestuffs—
Argols
Oporto, 117 cks.
Leghorn, 2
Cochineal
Gd. Canary, 20 bgs. Swanston & Co.
" 10 Burrell & Co
" 39 R. Evans & Woodhead
" 8 Sperling & Williams
" 20 J. N. Caballas & Co.
Las Palmas, 8 G. Stuart Bruce
" 13 Canary Island Trading Co.
Cutch
Rangoon, 900 bxs.
Extracts
Halifax, N.S., 53 cks.

Shumac
Palermo, 100 bgs. J. Kitchin, Ld.
" 2,239 250 bls.
Valonia
Smyrna, 893 bgs 473 quintals
" 175 940 Barry Brs.
" 940 G. Essayan & Co.
Farina—
Stettin, 50 bgs.
Glucose—
New York, 200 brls. T. M. Duche & Sons
Dunkirk, 200 bgs.
New York, 250
Glue—
Antwerp, qty.
Genoa, 23 cks. Inglis Wrolff
Rotterdam, 1 cs. 20 bgs.
Limestone—
Antwerp, 5 crts.
Mercuric Oxide—
Hamburg, 4 cks.
Molasses—
Halifax, N.S., 1 pun. W. Thompson
Alexandria, 1,346 cks.
Muriatic Acid—
Paris, 1 cs. Seine & Mersey S. S. Co., Ld.
Naphtha—
Antwerp, 2 dms.
Nitric Acid—
Paris 1 cs. Seine & Mersey S. S Co., Ld.
Ochre—
Bordeaux, 71 cks.
Rotterdam, 14
Paraffin Scale—
New York, 50 cs. Thompson & Bedford
Baltimore, 200 brls.
Phosphate—
Oruba Island, 425 t.
Antwerp, 400
Pitch—
Dunkirk, 56 cks.
Potash—
Dunkirk, 9 cks. 46 dms.
Hamburg, 100
Montreal, 25 brls.
Potassium Carbonate—
Stettin, 4 cks.
Pyrites—
Huelva, 3,480 t. Matheson & Co.
Rosin—
Para 16 bgs. J. Martins
Salicylic Acid—
Hamburg, 1 cs.
Soap—
Paris, 2 cs. Seine & Mersey S. S. Co, Ld.
Tangiers, 35 cs.
Rotterdam, 8 cks.
Soapstone—
Bordeaux, 100 bgs. G. G. Blackwell, Sons & Co.
Starch—
Rotterdam, 86 cs.
" 150 Browne, Geveke, & Co.
New York, 100 bgs.
Antwerp, 218 J. T. Fletcher & Co.
Baltimore, 200 sks.
Antwerp, 305
Stearine—
Antwerp, 13 bgs.
St. John's, N'fld., 15 cks T. Boyd & Co.
" 5 Harrington & White
Sulphur—
Catania, 67 brls. 50 cs. 210 bgs.
Tallow—
B. Ayres, 840 cks. 1,000 hf.-pps.
New York, 50 tcs. Colby & Co.
" 500 110 brls. "
St. John's, N.fld., 8 cks. J. J. Langley
Zarate, 248 pps. J Nelson & Sons
Tartar—
Bordeaux, 33 cks.
Treacle—
Bordeaux, 3 cs.
Varnish—
New York, 2 brls. H. Richmond
Waste Salt—
Hamburg, 1,016 bgs.
White Lead—
Antwerp, 16 brls.
Rotterdam, 110 cks.

Wood Pulp—
Antwerp, 27 bls.
Gothenburg, 10 M. Relp & Co.
Halifax, N.S., 159 A. G. Kidston & Co.
Zinc Oxide—
New York, 100 brls.
Antwerp, 75
Rotterdam, 25 cks.
Zinc White—
Rotterdam, 120 cks.

MANCHESTER.

Week ending December 5th.

Albumen—
Gothenburg, 1 cs.
Paris, 9
Ammonium Chloride—
Antwerp, 5 brls.
Aniline—
Rotterdam, 89 cks. 4 cs.
Aniline Colours—
Rotterdam, 21 cks. 4 cs. 8 brls. 3 bxs.
Asbestos—
Rouen, 5 cks.
Barytes—
Rotterdam, 20 bgs.
Boracic Acid—
Hamburg, 6 cks.
Caustic Potash—
Hamburg, 12 dms.
Chemicals *(otherwise undescribed)*
Rouen, 10 cks.
Chrome Acetate—
Rotterdam, 5 brls.
Chromium Chloride—
Rotterdam, 3 brls.
Cottonseed Oil—
New York, 10 brls.
Colours—
Hamburg, 7 cks. 17 cs.
Ghent, 2 brls.
Antwerp, 10
Rouen, 2
Rotterdam, 28 37 66 8 bxs.
Dibetanaphthol—
Rotterdam, qty.
Dyestuffs—
Alizarine
Rotterdam, 30 cks. 59 brls. 2 bxs.
Extracts
Antwerp, 2 brls.
Indigo
Rotterdam, 4 cbts.
Farina—
Hamburg, 801 bgs.
Gelatine—
Antwerp, 5 cs. J. T. Fletcher & Co.
Rouen, 10
Glucose—
New York, 100 brls. T. M. Duche & Sons
Glue—
Antwerp, 3 brls. 10 bls.
Rouen, 10 cks.
Limestone—
Antwerp, 5 crts. 6 cs.
Litharge—
Rotterdam, 14 cks.
Lithopone—
Hamburg, 40 cks.
Potassium Chlorate—
Gothenburg, 40 kgs.
Potassium Chloride—
Hamburg, 25 cks. 40 dms.
Pumice Stone—
Rotterdam, 10 cs.
Rosin—
Savannah, Georgia, 3,200 brls.
Saltpetre—
Hamburg, 1 brl.
Sodium—
Rotterdam, 5 cks.
Sodium Sulphate—
Rotterdam, 4 brls.
Starch—
Hamburg, 318 cs.
New York, 200 bgs. T. M. Duche & Sons
" 400 400 sks.
Rotterdam, 60 cs.

Stearine—
Rotterdam, 13 bls.
Tallow—
New York, 25 tcs. Co-op. W'sale Society, Ld.
Rouen, 144 bgs.
Tar Salts—
Hamburg, 2 cks.
Tar Waste—
Rotterdam, 3 cks.
Wood Pulp—
Gothenburg, 900 bls.
Antwerp, 65
Christiania, 200 10 cs. W. H. Ingram
Zinc Chloride—
Rotterdam, 13 cks.
Antwerp, 20 brls.
Zinc Oxide—
Hamburg, 15 cks.
Rotterdam, 25 brls.
Zinc White—
Rotterdam, 5 cks.

HULL.

Week ending December 5th.

Acids—
Bari, 92 cs. Wilson, Sons. & Co., Ld
Aniline Colours—
Rotterdam, 1 ck. Hutchinson & Son
Barytes—
Antwerp, 162 cks. Bailey & Leetham
" 166 H. F. Pudsey
Amsterdam, 33 Hutchinson & Son
Bremen, 14 G. Holmes & Co.
Chemicals *(otherwise unadescribed)*
Stettin, 3 cks. Wilson, Sons, & Co., Ld.
Christiania, 40 "
Bremen, 8 cs. Veltmann & Co.
1 kg.
4 cks. Todd & Son
" Dunkirk, 50 pks. Wilson, Sons, & Co., Ld.
Rotterdam, 2 W. & C. L. Ringrose
Antwerp, 35 dms. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 4 cks. Wilson,
9 cs. Sons, & Co., Ld.
Trieste, 103 brls.
Bremen, 4 cks. Blundell, Spence, & Co.
" 4 W. H. Walton & Co.
Dunkirk, 21 brls. Wilson, Sons, & Co., Ld.
Rotterdam, 116 cks. Hutchinson
2 pks. & Son
" 126 1 cs. W. & C. L.
89 brls. Ringrose
Cottonseed Oil—
New York, 303 brls. Wilson, Sons, & Co., Ld.
Cryolite—
Copenhagen, 3 cks. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 6 brls. W. & C. L. Ringrose
Argols
Bordeaux, 24 cks. Wilson, Sons, & Co., Ld.
Indigo
Amsterdam, 10 chts. Wilson, Sons, & Co., Ld.
Shumac
Trieste, 247 bgs. Wilson, Sons, & Co., Ld.
Palermo, 1,075 pks. "
" 970 bgs.
Cyprus, 226
Farina—
Stettin, 200 bgs. Wilson, Sons, & Co., Ld.
Harlingen, 425 W. & C. L. Ringrose
" 225 bls. Hutchinson & Son
Glucose—
New York, 550 brls.
Stettin, 18 cks.
Glue—
New York, 40 cs. Wilson, Sons, & Co., Ld.
Antwerp, 13 cks. Bailey & Leetham
Boston, 1 kg. Wilson, Sons, & Co., Ld.
Dunkirk, 41 cks. "
Kaolin—
Amsterdam, 20 cks. Reckitt & Sons
Ochre—
Rouen, 40 cks. Rawson & Robinson
Pumice Stone—
Messina, 108 pks. Wilson, Sons, & Co , Ld.
Quicksilver—
Hamburg, 5 jars Wilson, Sons, & Co., Ld.
Starch—
Ghent, 144 cs. Wilson, Sons & Co , Ld.
" 310 Hutchinson & Son
Antwerp, 109 Wilson, Sons, & Co., Ld.
Stearine—
Antwerp, 63 bgs. Wilson, Sons, & Co., Ld.
Tallow—
New York, 150 brls. Wilson, Sons, & Co., Ld.
Tartar—
Bordeaux, 17 cks. Rawson & Robinson
Tartaric Acid—
Rotterdam, 6 cks. Hutchinson & Son
Treacle—
New York, 350 brls. Wilson, Sons, & Co., Ld.
Boston, 325 "
Ultramarine—
Rotterdam, 1 ck. W. & C. L. Ringrose
Bremen, 10
Varnish—
Antwerp, 2 brls. T. F. Chambers & Co.
White Lead—
Ghent, 4 brls. Hutchinson & Son
Rotterdam, 11 cks. W. & C. L. Ringrose
Amsterdam, 167 "
Rotterdam, 32 Hutchinson & Son
Wood Pulp—
Abo, 100 bls. J. Good & Sons
Hango, 26 "
Bremen, 100 Veltmann & Co.
Zinc Oxide—
Antwerp, 20 brls. Wilson, Sons, & Co., Ld.

GLASGOW.

Week ending December 10th.

Acetic Acid—
Rotterdam, 7 cks. J. Rankine & Son
Aluminium—
New York, 1 bx.
Aniline—
Rotterdam, 7 cks. 8 cs. 34 pks. J. Rankine & Son
Antimony Salt—
Hamburg, 26 cks.
Arachide Oil—
Rotterdam, 1 ck. J. Rankine & Son
Barytes—
Rotterdam, 129 cks. J. Rankine & Son
Chemicals *(otherwise undescribed)*
New York, 1 carboy
Colours—
Rotterdam, 37 cks. 1 cs. J. Rankine & Son
Cream of Tartar—
Barcelona, 15 cks.
Dyestuffs—
Alizarine
Rotterdam, 171 cks. 21 pks. 6 cs. J. Rankine & Son
Indigo
Rotterdam, 2 chts. J. Rankine & Son
Glucose—
New York, 250 brls.
Glue—
Rotterdam, 100 bgs. J. Rankine & Son
Pitch—
Amsterdam, 13 cks.
Potash—
Rotterdam, 46 cks. J. Rankine & Son
Potassium Sulphate—
Rotterdam, 6 cks. J. Rankine & Son
Rosin—
New York, 100 brls.
Soda—
Rotterdam, 4 cks. J. Rankine & Son
Starch—
New York, 875 bgs.
Stearine—
Rotterdam, 16 cks. J. Rankine & Son
Amsterdam, 184 bgs.
Tartaric Acid—
Rotterdam, 4 cks. J. Rankine & Son
Treacle—
Philadelphia, 375 brls. Waddell & Bryson
" 330
New York, 200 Waddell & Bryson
Waste Salt—
Hamburg, 999 bgs.
White Lead—
Rotterdam, 38 cks. J. Rankine & Son
Whiting—
Rouen, 200 bgs.
Wood Pulp—
Christiania, 2,572 bls. 2 cs.
Zinc Oxide—
New York, 100 brls.
Zinc White—
Rotterdam, 95 cks. J. Rankine & Son

TYNE.

Week ending December 5th.

Ammonium Chloride—
Rotterdam, 2 brls. Tyne S. S. Co
Barium Chlorate—
Rotterdam, 350 bgs. Tyne S. S. Co
Barytes—
Antwerp, 400 bgs. Tyne S. S. Co
Borax—
Aarhuus, 1 ck.
Colours—
Antwerp, 6 cks. Tyne S. S. Co
Limestone—
Antwerp, 4 cs. Tyne S. S. Co
Phosphate—
Antwerp, 250 t. Langdale Chemical M. Co
Saltpetre—
Hamburg, 16 cks. Tyne S. S. Co
Soap—
Rotterdam, 4 cs. Tyne S. S. Co

GOOLE.

Week ending December 2nd.

Alizarine—
Rotterdam, 111 cks. 1 cs.
Antimony Sulphide—
Boulogne, 6 cks.
Barytes—
Antwerp, 200 bgs.
Caoutchouc—
Boulogne, 3 cks.
Calais, 1 pk.
Colours—
Rotterdam, 1 ck.
Dyestuffs *(otherwise unadescribed)*
Rotterdam, 297 cks. 51 cs.
Boulogne, 27 24
Farina—
Delfzyhl, 715 bgs.
Potash—
Hamburg, 18 dms.
Calais, 25
Dunkirk, 4 cks. 16
Pyrites—
Huelva, 1,130 t.
Saltpetre—
Hamburg, 6 cks. 40 bgs.
Waste Salt—
Hamburg, 705 cks. 300 bgs. 290 t.
Wood Pulp—
Rotterdam, 51 bls.

GRIMSBY.

Week ending December 5th.

Albumen—
Hamburg, 11 cks.
Caoutchouc—
Hamburg, 4 cs.
Chemicals *(otherwise unadescribed)*
Antwerp, 1 cs.
Hamburg, 3
Colours—
Hamburg, 76 cks. 3 cs. 40 pks.
Antwerp, 4 32
Dyes—
Rotterdam, 10 kgs.
Soap—
Rotterdam, 50 cs.
Starch—
Antwerp, 12 cs.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 9th.

Acetic Acid—
Sydney, 12 cs. £25
Wellington, 4 33
Cape Town, 3 c. 25
Dunedin, 25 49
Christchurch, 20 40
Ammonia—
Trinidad, 56 cks. £22
Christchurch, 2 cs. 13
Ammonium Carbonate—
Yokohama, 4 t £106
Calcutta, 3 c. 21
Melbourne, 5 7
Dunedin, 10 17
Ammonium Chloride—
Sydney, 10 t. £215
Constantinople, 7 241
Ammonium Sulphate—
Trinidad, 25 t. 4 c. £150
Antwerp, 113 867
Bremen, 30 400
Ostend, 10 80
Jersey, 57 466
Amorphous Phosphorus—
Hong Kong, 2 c. £27
Otago, 1 13
Anhydrous Ammonia—
Cologne 51 cylrs. £
Arsenic—
Christchurch, 2 t £
Barium Binoxide—
Paris, 17 t. 3 c. £
Bisulphite of Lime—
Calcutta, 3 t. 3 c. £

Bleaching Powder—
Pt. Chalmers, 11 c. £10
Lyttelton, 1 t. 21
Boracic Acid—
Antwerp, 12 cks. £62
Borax—
Townsville, 10 c. £10
Wellington, 12 12
Ostend, 16 30
Carbolic Acid—
New York, 1 dm. £7
Bombay, 14 10
Carbon Bisulphide—
B. Ayres, 10 c. £10
Carbonic Acid Gas—
Lyttelton, 10 c. £36
Caustic Soda—
Auckland, 10 c. 3 cs. £78
Philadelphia, 5 t. 7 110
Napier, 8 20
Dunedin, 5 11
Algoa Bay, 2 2 62
E. London, 12 17
Natal, 3 6 71
Chemicals *(otherwise undes.)*—
Hamburg, 10 cks. £100
Sydney, 28 pks. 21
Auckland, 7 102
Dunedin, 8 c. 37
Brisbane, 16 19
Cape Town, 4 cs 20
Dunkirk, 31 cks. 5 t. 19 525
Montreal, 3 16
Toronto, 1 5
Rotterdam, 3 2 60
Lisbon, 1 59
Christiania, 5 cks. 60
Lyttelton, 17 dms. 13 39
Chloride of Gold—
Algoa Bay, 1 cs. £22
Chloroform—
Sydney, 1 c. £20
Citric Acid—
Hamburg, 22 kgs. £255
Algoa Bay, 3 5 c. 50
Auckland, 2 12
Melbourne, 2 t. 5 272
Bombay, 2 15
Fremantle, 5 36
Pt. Elizabeth, 1 cs. 7
Barcelona, 12 69
Copenhagen, 10 60
Coal Products—
Aniline Oil
New York, 10 dms. £500
Benzol
Amsterdam, 17 dms. £450
Rotterdam, 23 620
Creosote
Dieppe, 23,500 gallons £123
Creosote Salts
Philadelphia, 672 bgs. £180
Naphtha
Brussels, 25 dms. £114
Naphthaline
Treport, 151 bgs. £97
Pitch
Malta, 128 cks. £41
Dunkirk, 250 t. 350
Antwerp, 2,797 5,039
Pyridine
Amsterdam, 12 cks. £127
Pyridine Bases
Rotterdam, 3 dms. £133
Tar
Batoum, 20 brls. £38
Melbourne, 100 dms. 18
Coal Products *(otherwise undes.)*—
Natal, 10 rnlts. £7
Copper Sulphate—
Rheims, 10 t. £360
Pt. Elizabeth, 1 2 c. 15
Marseilles, 25 441
Dunedin, 1 5 21
M. Video, 5 5
Paris, 20 356
Wellington, 11 9
Cream of Tartar—
Sydney, 1 t. £89
Melbourne, 1 5 c. 106
Napier, 10 45
Wellington, 3 12 335
Natal, 10 44
Kobe, 10 48
Disinfectants—
Madras, 1 t. 1 c. £20
Natal, 12 cs. 40
Sydney, 3 25
Colombo, 50 dms. 25
Auckland, 3 15
Paris, 15 cks. 75
Hamburg, 25 251 glns 135
Trinidad, 1 5 39
Bombay, 1 5 3,005 193
Cape Town, 208 cks. 400 160
Magnesium Carbonate—
Melbourne, 1 cs. £1
Manure—
Cape Town, 4 t. £42
Santa Cruz, 10 65
Jamaica, 3 3 c. 17
Lyttelton, 3 30
Jersey, 431 6 2,108
Mirbane Oil—
Brisbane, 5 c. £16
Hamburg, 1 t. 60
Nitric Acid—
Auckland, 12 cs £20
Jersey, 21 pks. 15 cbys. 50
Melbourne, 4 8
Nitrogen Protoxide—
Dunedin, 1 cs. £23
Nitrous Oxide—
Sydney, 1 cs. £10
Melbourne. 2 19
Oxygen—
Genoa, 2 cs. £28
Phosphoric Acid—
Trinidad, 1 t. £13
Phosphorus—
Otago, 1 c. £10
Potash Crystals—
Christchurch, 3 cks. £17
Potassium Bicarbonate—
Yokohama, 10 c £14
Potassium Bichromate—
Hong Kong. 2 c. £5
Potassium Carbonate—
Yokohama, 10 c. £13
Auckland, 1 ck. 3
Potassium Chlorate—
Calcutta, 10 c. £19
Hong Kong, 1 t. 37
Potassium Cyanide—
Madras, 5 c. £8
New York, 55 cs. 411
Delagoa Bay, 50 254
Sydney, 2 215
Algoa Bay, 1 t. 840
Potassium Prussiate—
Genoa, 25 cks. £364
Philadelphia, 17 263
Salicylic Acid—
Cape Town, 2 cs. £78
Saltpetre—
Cape Town, 6 c. £7
Algoa Bay, 9 10
Pt. Elizabeth, 9 11
Sheep Dip—
Algoa Bay, 18 c. £33
Natal, 6 t. 1 194
M. Video, 3 12 46
B. Ayres, 128 14 2,853
Sydney, 3 50
Cape Town, 7 10 140
Punta Arenas, 18 13 355
Falkland Is., 80 dms. 53 cks. 1,420 glns. 718
Silver Nitrate—
Hong Kong, 160 ozs. £14
Bombay, 16 lbs. 14
Soda—
Karachi, 2 c. £9
Soda Ash—
Auckland 20 t. £81
Oamaru, 1 10 c. 11
Sodium Acetate—
Adelaide, 10 t. £140
Sodium Bicarbonate—
Algoa Bay, 1 c. £7
Perth, 4 t. 26
Auckland, 2 12
Cape Town, 3 7
Natal, 1 15 13
Sodium Prussiate—
Stettin, 17 cks. £197
Sulphur—
Colombo, 1 t. £6
Sulphuric Acid—
Cape Town, 2 t. 5 c. £21
Singapore, 2 10 24
Natal, 1 5 12
Tartaric Acid—
Auckland, 1 c. £6
Madras, 5 cs. 29
Hamburg, 10 55
Sydney, 3 t. 5 361
Melbourne, 2 10 283
Newcastle, 2 14
Natal, 3 17
Karachi, 3 19
Fremantle, 5 36

LIVERPOOL.

Week ending December 9th.

Albumen—
Boston, 5 t. 10 c. £110
Alum—
Piræus, 5 t. £25
Corunna, 1 2 c. 5
Aluminous Cake—
Halifax, 12 t. 4 c. 2 q. £32
Ammonium Carbonate—
Oporto, 1 t. 2 c. £34
Stockholm, 2 11 70
Venice, 11 12
Genoa, 11 1 q. 13
St. John's, 10 14
Ammonium Chloride—
Rotterdam, 5 t. 12 c. 1 q. £84
Constantinople, 4 7
Alexandria, 1 1 35
Piræus, 1 6 3 34
Kobe 1 10 36
Philadelphia, 37 4 1 785
Ammonium Sulphate—
Castellon, 62 t. £527
Valencia, 203 13 c. 1,640
Teneriffe, 10 80
Port Royal, 205 4 3 q. 1,550
Hamburg, 100 900
Gd. Canary, 10 80
Genoa, 20 9 161
Lisbon, 10 5 81
Las Palmas, 62 11 490
Antimony—
Bilbao, 1 t. £30
Gijon, 4 c. 1 q. 9
Antimony Sulphide—
Boston, 2 c. 3 q. £22
Bleaching Powder—
Baltimore, 77 cks.
Bordeaux, 8
Boston, 584
Genoa, 238
Ghent, 74
Havana, 30 brls.
Nantes, 59
Newport News, 192
New York, 556 25 27 bxs.
Oporto, 9
Philadelphia, 230
Piræus, 11
Portland, M., 18
San Sebastian, 40
Trieste, 14
Venice, 15
Boracic Acid—
Antwerp, 5 t. 18 c. 2 q £130
Portland, M., 2 10 70
New York, 1 33
Borax—
Barcelona, 1 t 1 c. 3 q. £22
Venice, 1 2 22
Elbing, 11 9 3 226
Portland, M., 2 10 2 52
Bahia, 1 20
Santander, 18 1 15
Rotterdam, 27 9 2 548
Antwerp, 18 9 1 370
Melbourne, 2 4 49
Calcium Chloride—
Rangoon, 3 t. 5 c. £7
Odessa, 15 3 32
Boston 3 8
M. Video, 4 18 11
Melbourne, 14 16 76
Carbolic Acid—
Lagos, 13 c. £13
Bombay, 13 cks. 50 dms. 31
New York, 10 80
Calcutta, 19 drs. 29
Old Calabar, 8 7
Rotterdam, 20 t. 1,212
Hamburg, 2 7 3 q. 154
Caustic Potash—
New York, 1 t. 1 c. £35
Sourabaya, 6 10
Cadiz, 4 6
Philadelphia, 5 85
Caustic Soda—
Alexandria, 18 dms.
Algoa Bay, 7
Alicante, 30
Amsterdam, 130
Antwerp, 24 brls.
Bahia, 45
Barcelona, 460 138 cks.
Batavia, 28
Beyrout, 20
Bordeaux, 31
Boston, 92 tcs. 95 1,320 bgs.
Corunna, 6 cs.
Delagoa Bay, 40
Fiume, 30
Genoa, 55
Hamburg, 50
Leghorn, 70
Lisbon, 10
Malaga, 150
Manaos, 5
Maranham, 20
M. Video, 40
Newfairwater, 116
N. Orleans, 85
Newport News, 200
New York, 1,135 100 20 bxs.
Odessa, 370
Oporto, 45 4 cks.
Palermo, 5
Para, 20
Paris, 116
Pernambuco, 170
Philadelphia, 300
Portland, M., 50 27
Riga, 52
Rotterdam, 28 5
St. John's, N'fld., 20
Samarang, 200
Santander. 15
San Francisco, 335
Sourabaya, 8
Syra, 15
Talcahuano, 30
Tampico, 35
Trieste, 15
Varna, 10
Vera Cruz, 100
Chemicals *(otherwise undescribed)*
Melbourne 1 t. £30
Brisbane, 5 c. 8
Marseilles, 6 9
Genoa, 2 11 78
Mersyne. 1 10 52
Constantinople, 3 q. 6
Calcutta, 91 19 1 203
Volo. 5 8
Hamburg, 1 30
Antwerp 5 8
Rotterdam, 1 28
Yokohama, 2 57
Odessa, 4 115
China Clay—
Barcelona, 20 t.
Bombay, 380 cks
Boston, 261
Maranham, 20
Rio de Janeiro, 30
Trieste, 250
Chloroform—
M. Video, 1 c. 1 q. £37
Coal Products—
Aniline Colours
New York, 16 kgs. 1 cs.
Portland, 4
Aniline Oil
Barcelona, 2 dms.
Aniline Salts
Barcelona, 16 cks.
Syra, 1
Pitch
Cette, 1,085 t.
Marseilles, 405
Rotterdam, 150 brls.
Rouen, 100
Tar
Belize, 25 dms.
Loanda, 15 brls.
Philadelphia. 25
St. John's, N'fld., 20 hf.-brls.
Seville, 8 cks.
Sherbro, 10
Sierra Leone, 20
Copper Sulphate—
Oporto, 28 t. 10 c. £440
Marseilles, 10 1 2 q. 158
St. Paulo, 9 3 10
Barcelona, 10 2 158
Rouen, 24 19 3 387
B. Ayres, 1 17
Para, 2 2
Alexandretta, 1 16
Odessa, 74 18 3 1,311
Talcahuano, 4 68
Cette, 59 17 1,020
Porto Rico, 4 19 85
Penang, 1 18
M. Video, 9 6 2 156
Leghorn, 4 6 3
Trieste, 5 1 198
Fiume, 3 3
Sydney, 20 343
Nantes, 10 1 160
Palermo, 12 14 399
Venice, 16 19 269
Genoa, 127 10 2,236
Bordeaux, 59 2 1 1,012
Naples, 27 11 440
Leghorn, 33 14 3 549
Paris, 24 16 3 [illegible]

Copperas—
Smyrna, 2 t. 16 c. £4
Disinfectants—
Algoa Bay, 40 kgs. £13
Calcutta, 3 t. 47
Rangoon, 20 dms. 15
Gelatine—
Philadelphia, 12 c. £262
Glue—
Shanghai, 4 t. £123
Barcelona, 9 3 c. 3 q. 66
Guano—
Palma, 15 c. 2 q. £8
Tarragona, 20 t. 148
Malaga, 20 156
Lead Acetate—
New York, 5 c. £5
Magnesia—
Hav.e, 5 t. £80
Philadelphia, 10 cs.
Manganese Chloride—
Genoa, 7 t. 6 c. £18
Paris, 10 3 25
Magnesium Sulphate—
Vera Cruz, 7 cks.
Manure—
Teneriffe, 5 t. £43
Las Palmas, 27 185
N. Orleans, 100 250
Gd. Canary, 10 82
Ochre—
Rangoon, 25 bgs.
Oxalic Acid—
Barcelona, 14 d £24
San Francisco, 5 t. 2 3 q. 167
Paint—
Antwerp, 1 ck. 28 dms.
Bathurst, 35 kgs.
Beyrout, 1 cs. 35
Belize, 6 112
Calcutta, 82
Cape Town, 20 60 260
Abonnema, 6
Ceara, 1
Curacao, 50
E. London, 100
Genoa, 17 2
Hamburg, 3
Havana, 2 10 cs.
Huasacao, 1
La Guayra, 7
M. Video, 20 pks. 1
Muculla, 1
Mussera, 1
New York, 265
Para, 8 50 dms.
Payta, 11 cs.
Singapore, 5
Smyrna, 93
Painters' Colours—
Antwerp, 24 kgs.
B. Ayres, 1 cs. 60 139 brls.
50 dms.
Para, 8 tcs. 67 37
Patras, 4
Paraffin Wax—
Algiers, 6 cs.
Paris, 10
Seville, 10 bgs.
Phosphorus—
Tampico, 1 t. £220
Hiogo, 3 715
Havana, 6 c. 70
Sourabaya, 3 40
Shanghai, 2 8 480
Potassium Bichromate—
Vera Cruz, 7 c. 2 q. £15
Smyrna, 5 t. 5 1 210
Potassium Chlorate—
Havana, 1 t. £40
Hong Kong, 1 39
Hiogo, 25 939
Philadelphia, 5 188
New York, 11 5 c. 500
Copenhagen, 6 5 209
Venice, 10 20
Libau, 1 39
Leghorn, 10 19
Halifax, 10 20
Vera Cruz, 1 38
Hamburg, 4 138
M. Video, 1 1 2 q. 40
Corunna, 6 12
Yokohama, 5 180
Naples, 1 39
Antwerp, 2 78
Potassium Cyanide—
Cartagena, 5 c. £32
Salt—
Abonnema, 41 t. 7 c.
Ambrizette, 10
Antwerp, 240
Axim, 2
Bahia, 9
Bakana, 42 8
Batanga, 9
Belize, 9
Boma, 2 10
Boston, 407
Brass, 10
B. Ayres, 50
Calcutta, 7,082 4
Callao, 1 16
Cameroons, 55
Cape Town, 25 cs.
Christiania, 700
Demerara, 15 10
Fuca, 20
Galveston, 500
Ghent, 180
Halifax, 29
Havana, 1 1
Kingston, 1 5
Kotonon, 1 5
Lagos, 120
Landana, 60
Manaos, 202 10
Melbourne, 366
M. Video, 26 13
Newcastle, 490
N. Orleans, 65
Newport News, 20
New York, 91
Noqui, 327 10
Para, 62 10
Pt. Natal, 120
Quillo, 340
Pram Pram, 5
Rio Del Rey, 30
St. John's, N'fd., 15
St. John, N.B., 155
San Francisco, 300
Savannah, 742
Shanghai, 25
Sherbro, 50
Sierra Leone, 188 13
Sydney, 287
Trinidad 17 17
Valparaiso, 215 12
Salt Cake—
Gijon, 57 t. £115
Baltimore, 50 1 c. 87
Saltpetre—
Maranham, 11 c. 3 q. £13
Barcelona, 3 t. 15 78
Syra, 3 18 84
Parnahyba, 3 3 5
Piræus, 2 10 2 54
Sheep Dip—
Boca, 5 c £8
Belize, 1 2 q. 5
Pt. Elizabeth, 200 dms. 50 cs. 170
M. Video, 520 144
St. Nazaire, 2 t. 2 60
E. London, 300 dms. 62
Cape Town, 600 87
B. Ayres, 106 t. 18 3 q. 2,575
Soap—
Addah, 8 bxs.
Alexandria, 40 kgs. 50 cs.
Algoa Bay, 125
Anamaboe, 40
Antwerp, 50
Assinee, 60
Baltimore, 25
Barbadoes, 1,275
Batavia, 1,000
Bathurst, 55
Bazin, 87
Bombay, 250 59
Brisbane, 400
Calcutta, 425 bdls. 36
C. C. Castle, 50
Cape Town, 500
Copenhagen, 40
Curacao, 100
Deiagoa Bay, 100
Demerara, 1,309
Drewin, 62
E. London, 800
Elmina, 130
Gibraltar, 30
Guayaquil, 1,301
Hamburg, 260
Iquique, 25
Hong Kong, 614
Karachi, 97
Kingston, 2,363
La Guayra, 1
Las Palmas, 580
Macassar, 1,600
Madeira, 12
Malta, 40 30
Manaos, 950
Menado, 1,500
New York, 646 36
Old Calabar, 120
Para, 200 1
Patras, 1
Philadelphia, 63
Pt. Elizabeth, 700 50 brls.
Portland, Me., 23 bdls.
Pt. Natal, 1,440 6
Rangoon, 500 5
Rotterdam, 351
St. John's, N'fd., 120
St Lucia, 130
Salt Pond, 25
San Juan Del Sur, 450
Sapeli, 150
Sierra Leone, 207 2
St. Thomas, 1
Singapore, 3,000 100
Sinoe, 1
Smyrna, 20
Tampico, 1
Teneriffe, 250
Trinidad, 500
Warri, 200
Soda Alkali—
B. Ayres, 35 brls.
Odessa, 50
Smyrna, 55
Sydney, 55 2 bgs.
Tampico, 35
Soda Ash—
Antwerp, 109 bgs.
Baltimore, 203 cks.
Batavia, 50
Boston, 21
B Ayres, 50 50 brls.
Cadiz, 22
Calcutta, 78 100 kgs.
Callao, 24
Calmar, 93
Corfu, 60 brls.
Genoa, 200
Gothenburg, 18
Halifax, 28 tcs.
Havre, 20
Hong Kong, 60
Lagos, 25 brls.
Leghorn, 200
Libau, 160
Malaga, 26
Maranham, 48
Melbourne, 344
New York, 128 169 tcs. 3642
Oporto, 35
Philadelphia, 86 155 2560
Portland, Me., 360
Porto Alegre, 100
Puerto Cabello, 3
Rio de Janeiro, 160
Rio Grande do Sul, 40
Samarang, 16
San Francisco, 446
Smyrna, 350
Sourabaya, 10
Syra, 125 brls.
Tampico, 28
Yokohama, 150
Zante, 100
Soda Crystals—
Bombay. 500 kgs.
Kustendjie, 34 cks.
New York, 280 brls. 4
Rodosto, 15
St. John's, N'fd., 25
St. John, N.B., 12 cs.
Halifax, 50
Varna, 14
Philadelphia, 20 70 280 bgs.
Sodium Bicarbonate—
Alexandria, 30 brls.
Algoa Bay, 30 kgs.
Antwerp, 10
Bombay, 435 34 cks.
B. Ayres, 20 10
Calcutta, 1,000
Genoa, 105
Gibraltar, 20
Gijon, 8
Hamburg. 10
Hong Kong, 30
Libau, 194
Marseilles, 20
New York, 5
Odessa, 851
Palermo, 30
Paris, 158 8
Pelotas, 20
Philadelphia, 10
Piræus, 10
Pt. Natal, 20
Rangoon, 10
Riga, 68
Rotterdam, 18
San Francisco, 10
Smyrna, 70
Sydney, 490
Tampico, 200
Trieste, 25
Yokohama, 500
Sodium Carbonate—
Baltimore, 56 brls.
Boston, 58
Genoa 110 kgs.
New York, 56
Sodium Chlorate—
Genoa, 4 brls.
Libau, 200 kgs.
M. Video, 30 dms.
Reval, 100
Rotterdam, 43
Rouen, 20
Sodium Hyposulphite—
Pacasmayo, 30 kgs.
Stannous Chloride—
Trinidad, 1 t.
Starch—
Ferrol, 50 bgs.
Sulphur—
Boston, 300 t. 9 c.
Copenhagen, 5 2
Demerara, 14 4 2 q
Sulphuric Acid—
Maranham, 18 c.
Superphosphates—
Gd. Canary, 7 t.
Arucas, 10
San Sebastian, 21 2 c.
Tartaric Acid—
Vera Cruz, 1 c.
Tin Chloride—
Cadiz, 3 c.
Turpentine—
St. John's, 6 c. 1 q
Varnish—
Barcelona, 18 brls.
Tampico, 1 ck.
Havana, 1 ck. 6
Seville, 6
White Lead—
B. Ayres, 201 kgs.
Piræus, 3
Zinc Chloride—
Bombay, 1 t. 4 c. 2 q

MANCHESTE

Week ending December 9t

Alum—
Alexandria, 250 brls.
Acre, 25
Beyrout, 40 cks.
Sfax, 3
Tripoli, B., 2
Tunis, 2
Ammonium Carbonate—
Copenhagen, 36 cks. 10 kgs
Hamburg, 3
Ammonium Chloride—
Caiffa, 3 brls.
Tunis, 3
Aniline Oil—
Antwerp, 3 dms.
Rotterdam, 10
Aniline Salt—
Antwerp, 5 cks.
Benzol—
Treport, 30 cks.
Rotterdam, 12 dms.
Bichrome—
Rio de Janeiro, 5 cks.
Bleaching Powder—
Tunis, 2 cks.
Carbolic Acid—
Rotterdam, 20 cks.
Treport, 8 474 blls.
Caustic Soda—
Tunis, 25 dms.
Beyrout, 20
Chemicals *(otherwise unsp.)*—
Alexandria, 30 cks.
Mersyne, 5
Citric Acid—
Bussorah, 1 cs.
Copperas—
Beyrout, 15 brls.
Sfax, 3
Cottonseed Oil—
Tunis, 180 brls.
Glue—
Antwerp, 10 cks.

Linseed Oil—
Beyrout, 17 brls.
Mineral White—
Rio de Janeiro, 10 bgs.
Painters' Colours—
Antwerp, 3 pks.
Jaffa, 5 brls.
Rio de Janeiro, 2 cs.
Paraffin Wax—
Alexandria, 10 cs.
Tunis, 10 bgs.
Pitch—
Cette, 680 t.
Salt Cake—
Antwerp, 100 t. 6 c.
Soap—
Malta, 2 cs.
Rotterdam, 63 bxs.
Soda Ash—
Beyrout, 15 brls.
Soda Crystals—
Alexandria, 50 brls.
Tunis, 50 cks. 35 bgs.
Sodium Bicarbonate—
Sfax, 8 cks. 5 brls.
Tunis, 35 kgs.
Sodium Sulphate—
Rio de Janeiro, 18 cks.
Sulphuric Acid—
Rio de Janeiro, 28 cs.
Tar Oil—
Hamburg, 4 cks.
Treport, 52

HULL.

Week ending December 5th.

Alkali—
Constantinople, 400 cks.
Hango, 5
Ammonium Sulphate—
Ghent, 850 bgs.
Rouen, 68
Venice, 301
Antwerp, 1,500
Benzol—
Rotterdam, 25 cks.
Bleaching Powder—
Fiume, 21 cks.
New York, 90
Caustic Soda—
Danzig, 35 dms.
Fiume, 20
Stettin, 10
Chemicals (*otherwise undescribed*)
Antwerp, 26 cs.
Amsterdam, 2 cks.
Bremen, 20
Bari, 10
Christiania, 31 27 55 pks.
1,604 slbs.
Copenhagen, 4 7
Danzig, 7 2 20
Drontheim, 10 334 slbs.
Gothenburg, 47
Hamburg, 27 165
Libau, 13
New York, 5
Odessa, 21 1 dm.
Rotterdam, 18 56
Riga, 18 15 pks.
Stettin, 10 8
Stavanger, 355 slbs. 9 20
Venice, 29 cks.
Cottonseed Oil—
Antwerp, 499 c.
Amsterdam, 1,482
Christiania, 35
Constantinople, 116
Fiume, 84
Gothenburg, 34
Hamburg, 384
Konigsberg, 339
Rotterdam, 646
Rouen, 345
Stockholm, 252
Trieste, 100
Dyestuffs (*otherwise undes.*)—
Christiania, 20 bgs.
New York, 2 dms.
Riga, 3 cks. 17 pks.
Glue—
Gothenburg, 10 bgs.
Rotterdam, 1
Amsterdam, 10
Guano—
Dunkirk, 70 t.

Linseed Oil—
Antwerp, 4 c.
Amsterdam, 51
Alexandria, 20
Bergen, 17
Christiansand, 67
Christiania, 88
Copenhagen, 210
Constantinople, 36
Drontheim, 25
Gothenburg, 7
Hamburg, 340
Rotterdam, 97
Venice, 22
Ochre—
Hamburg, 2 cks.
Painters' Colours—
Antwerp, 40 cks. 60 cs. 10 pks.
Amsterdam, 1
Abo, 1
Boston, 25
Bremen, 1
Christiansand, 12
Copenhagen, 35
Danzig, 11
Dunkirk, 1
Drontheim, 20 dms.
Gothenburg, 1 pk.
Hamburg, 5 6
Messina, 4
Odessa, 25
Rotterdam, 112 15 dms.
Rouen, 6 4
Riga, 3 3 5 pks.
Stettin, 20 50
Pitch—
Antwerp, 230 t.
Soap—
Abo, 1 cs.
Christiania, 1
Copenhagen, 1
Drontheim, 150
Stearine—
Hamburg, 3 cks.
Tallow—
Amsterdam, 24 cks.
Stockholm, 7
Tar—
Amsterdam, 6 cks.
Aalesund, 3
Rotterdam, 1
Riga, 1
Treacle—
Bergen, 50 cks.
Christiania, 25
Turpentine—
Alexandria, 100 dms.
Varnish—
Ghent, 2 cs.
Hamburg, 1
Rotterdam, 2 cks.
Stockholm, 2
Antwerp, 3
Stettin, 8

GLASGOW.

Week ending December 10th.

Aluminium—
Bombay, 5¼ c.
Ammonium Sulphate—
Genoa, 26 t. 6¼ c.
Antwerp, 202
Bordeaux, 20
Demerara, 75
U.S.A., 51 2¾
Asbestos—
E. London, £113
Bleaching Powder—
Melbourne, 40 t. 14½ c.
Boracic Acid—
Hiogo, £69
Borax—
Rotterdam, £9
Carbonic Acid Gas—
Rangoon, £130
Caustic Soda—
Melbourne, 5 t. 6½ c.
Cod Oil—
Italy, £95
Melbourne, 57
Coal Products—
Creosote Oil
Russia, £100
Pitch
Italy, £165
Rangoon, 3
Antwerp, 455 t.
Bombay, 143
U.S.A., 52
Tar
Rangoon, £90
Bombay, 124
Rotterdam, 42 brls.
Tar Acids
U.S.A., £40
Coal Products (*otherwise undes.*)—
Rotterdam, £338
Cresylic Acid—
U.S.A., £50
Extracts—
Genoa, £23
Montreal, 114
Farina—
U.S.A., 2 t. 10 c.
Iodine—
Rotterdam, £250
Linseed Oil—
Canada, 5 t. 4 c.
Rangoon, 3 19¾
Adelaide, 2 8
Melbourne, 1 11
Wellington, 1 4
Manganese Oxide—
U.S.A., £105
Manure—
Demerara, 36 t.
Paint—
Pt. Louis, £21
Bengal, £37. 10s.
Painters' Colours—
Bombay, £160
B. Ayres, 210
Cape Town, qty.
Adelaide, 149
Melbourne, ,,
Singapore, 104
Demerara, £23. 15s.
Rotterdam, £35
Paraffin Wax—
Bombay, £22
Italy, 766
Russia, 1,100
Turkey, 143
Bordeaux, 32
Christiania, 41
Potassium Bichromate—
B. Ayres, £82
Oporto, 206
Turkey, 206
Hiogo, 40
Yokohama, 205
Christiania, 164
Rotterdam, 196
Soap—
Dominica, 2 t. 10 c.
Pt. Louis, 14 4½
Antigua, 1 8
Bombay, 2 ½
Sodium Bichromate—
Italy, 25 t. 17 c.
Stannine—
Demerara, £70
Starch—
Rotterdam, 14 c.
Sulphur—
Demerara, 17 t. 3¾ c.
Sulphuric Acid—
Rangoon, £309
M. Video, 35
Tallow—
Turkey, £375
Rotterdam, 8 t. 2 c.
Tartaric Acid—
Rangoon, £27
Treacle—
Bergen, 2 t. 11½ c.
Christiania, 50 6
Drontheim, 2 16
White Lead—
Pt. Louis, £26
Transvaal, 56

TYNE.

Week ending December 5th.

Alkali—
Copenhagen, 11 t. 12 c.
Ammonium Carbonate—
Barcelona, 10 c.
Ammonium Sulphate—
Dunkirk, 70 t.
Antimony—
Stockholm, 10 c.
Hamburg, 5 t.
Barcelona, 4 4
Arsenic—
Barcelona, 3 t. 10 c.
Bleaching Powder—
Gothenburg, 24 t. 17 c.
Copenhagen, 89 4
Odense, 10 3
Amsterdam, 84
Hamburg, 15 18
Antwerp, 73 19
Christiansund, 9 19
Caustic Soda—
Copenhagen, 13 t. 6 c.
Genoa, 23 4
Rotterdam, 1 4
Seville, 16 18
Stockholm, 15 1
Hamburg, 55
Antwerp, 4 18
Barcelona, 88 9
Colours—
Civita Vecchia, 1 t. 19 c.
Litharge—
Gothenburg, 1 t. 2 c.
Odessa, 2 13
Stockholm, 11
Magnesia—
Genoa, 5 c.
Hamburg, 1 t.
Barcelona, 6 6
Manure—
Valencia, 50 t.
Genoa, 100 1 c.
Paint—
Copenhagen, 3 c.
Hamburg, 3 t.
Antwerp, 1
Paraffin Wax—
Barcelona, 5 t.
Phosphorus—
Barcelona, 2 t. 18 c.
Soda—
Randers, 19 t. 3 c.
Stockholm, 39 18
Rotterdam, 30
Amsterdam, 22 10
Hamburg, 4 6
Antwerp, 5
Soda Ash—
Hamburg, 5 t. 8 c.
Sodium Sulphate—
Antwerp, 50 t. 2 c.
Sulphur—
Gothenburg, 55 t.
Tallow—
Genoa, 7 t. 14 c.
White Lead—
Stockholm, 9 t. 13 c.

GOOLE.

Week ending December 2nd.

Benzol—
Boulogne, 72 cks.
Rotterdam, 122 23 dms.
Chemicals (*otherwise unaescribed*)
Ghent, 6 cks.
Harlingen, 40
Coal Products (*otherwise unaes.*)—
Antwerp, 75 cks.
Boulogne, 2 dms.
Dunkirk, 25
Ghent, 3
Hamburg, 165
Rotterdam, 51
Colours—
Amsterdam, 1 ck.
Boulogne, 6 cs.
Harlingen, 3
Manure—
Dunkirk, 275 bgs.
Ghent, 200
Pitch—
Antwerp, 250 t.
Dunkirk, 250

GRIMSBY.

Week ending December 5th.

Chemicals (*otherwise undescribed*)
Hamburg, 2 cks. 51 dms.
Rotterdam, 3 1 cs.
Coal Products (*otherwise undes.*)—
Dieppe, 163 cks.
Hamburg, 5 pks.
Colours—
Antwerp, 2 cs. 11 pks.
Malmo, 1 ck.
Rotterdam, 1

PRICES CURRENT. WEDNESDAY, DECEMBER 16TH, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

		£	s.	d.
Acids :—				
Acetic, 25 °/₀ and 40 °/₀	per cwt.	5/10½ & 8/9		
,, Glacial	,,	0/-		
Arsenic S.G., 2000°	,,	1	4	0
Fluoric	per lb.	0	0	3¾
Muriatic (Tower Salts), 30° Tw.	per bottle	0	0	10
,, (Cylinder), 30° Tw.	,,	0	3	0
Nitric 80° Tw.	per lb.	0	0	1¾
Nitrous	,,	0	0	1¾
Oxalic	nett	0	0	3½
Phosphoric, 1750°	,,	0	0	11½
Picric	,,	0	0	11
Sulphuric (fuming 50 °/₀)	per ton	15	10	0
,, (monohydrate)	,,	5	10	0
,, (Pyrites, 168°)	,,	3	0	0
,, ,, 150°	,,	1	5	0
,, (free from arsenic, 145°)	,,	1	7	6
Sulphurous (solution) S.G. 1025	,,	3	0	0
Tannic (pure)	per lb.	0	1	2½
Tartaric	,,	0	1	1
Arsenic, white powdered	nett per ton	24	0	0
Alum (loose lump)	,,	4	10	0
Alumina Sulphate (pure)	,,	4	10	0
Aluminoferric	,,	2	5	0
Aluminium (Ingot metal 98/99¼ %)	nett per ton	155	0	0
Ammonia, Anhydrous	,,	0	1	4
,, ·880=28° B.	per lb.	0	0	2¾
,, =24° B.	,,	0	0	1¾
,, Carbonate	nett	0	0	3
,, Muriate	per ton	20	0	0
,, ,, (sal-ammoniac) 1st & 2nd	per cwt.	37/- & 35/-		
,, Nitrate	per ton	33	0	0
,, Phosphate	per lb.	0	0	4¼
,, Sulphate (grey) London	per ton	7	12	6
,, ,, (grey) Hull	,,	7	10	0
Aniline Oil (pure)	per lb.	0	0	10
Aniline Salt	,,	0	0	9½
Antimony	per ton	30	10	0
,, (tartar emetic)	per lb.	0	0	9¾
,, (golden sulphide)	,,	0	0	10
Barium Chloride	per ton	7	0	0
,, Carbonate (native)	,,	3	10	0
,, Sulphate (native levigated)	,,	42/6 to 65/-		
Bleaching Powder, 35 %	nett	6	12	6
,, Liquor, 7 %	,,	3	10	0
Bisulphide of Carbon	,,	13	10	0
Chromium Acetate (crystal)	per lb.	0	0	6
Calcium Chloride	per ton	2	2	6
China Clay (at Runcorn) in bulk	,,	15/- to 30/-		
Coal Tar Products and Dyes :—				
Alizarine (artificial) 20 %	nett per lb.	0	0	7
Magenta	,,	0	3	9
Anthracene, 30 % A, f.o.b. London	per unit per cwt.	0	0	9
Benzol, 90 %	per gallon	0	2	9
,, 50/90 ,,	,,	0	2	6
Carbolic Acid (crystallised 40°)	per lb.	0	0	7½
,, (crude 60°)	per gallon	0	2	1
Creosote (ordinary)	,,	0	0	2
,, (filtered for Lucigen light)	,,	0	0	2½
Crude Naphtha 30 % @ 120° C.	,,	0	1	3
Grease Oils, 22° Tw.	per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston	,,	1	8	0
Solvent Naphtha, 90 % at 160°	per gallon	0	1	7
"Lucigen" and "Wells" Oils	,,	0	0	0
Copper	per ton	48	7	6
,, Sulphate	,,	17	10	0
,, Oxide (copper scales)	,,	42	10	0
Glycerine (crude)	,,	37	10	0
,, (distilled S.G. 1250°)	,,	70	0	0
Iodine	nett, per oz.	0	0	9
Iron Sulphate (copperas)	per ton	1	10	0
,, Sulphide (antimony slag)	,,	2	0	0
Lead (sheet) for cash	,,	12	17	6
,, Litharge Flake (ex ship)	,,	14	10	0
,, Acetate (white ,,)	,,	21	10	0
,, ,, brown ,,)	,,	15	0	0
,, *Carbonate (white lead) pure*	,,	16	10	0
,, *Nitrate*	,,	18	10	0
Lime, Acetate (brown) (ex ship)	per ton	4	10	0
,, ,, (grey) (ex ship	,,	8	2	6
Magnesium (ribbon and wire)	per oz.	0	2	3
,, Chloride (ex ship)	per ton	2	7	6
,, Carbonate	per cwt.	1	17	6
,, Calcined Magne	per ton.	8	15	0
,, Sulphate (Epsom Salts)	per ton	2	15	0
Manganese, Sulphate	,,	16	10	0
Borate	per cwt.	2	10	0
,, Ore, 70 %	per ton	3	10	0
Methylated Spirit, 61° O.P.	per gallon	0	1	8
Naphtha (Wood), Solvent	,,	0	2	8
,, ,, Miscible, 60° O.P	,,	0	2	11
Oils :—				
Cotton-seed	per ton	16	10	0
Linseed	,,	17	10	0
Petroleum, American	per gallon	0	0	7
Stearine	per ton	20	10	0
Phosphorus (yellow)	per lb.	0	2	2
,, (red)	,,	0	2	8
Potassium (metal)	per oz.	0	3	7
,, Bichromate	nett per lb.	0	0	4½
,, Carbonate, 90% (ex ship)	per ton	17	15	0
,, Chlorate	per lb.	0	0	4½
,, Cyanide, 98%	,,	0	0	11½
,, Hydrate (Caustic Potash) 90 %	per ton	24	5	0
,, ,, (Caustic Potash) 75/80 %	,,	21	0	0
,, ,, (Caustic Potash) 70/75 %	,,	20	0	0
,, Nitrate (refined)	per cwt.	1	1	6
,, Permanganate	per cwt.	3	17	6
,, Prussiate Yellow	per lb.	0	0	5¾
,, Sulphate, 90 % (ex ship	per ton	9	15	0
,, Muriate, 80 % (do.)	,,	8	10	0
Silver (metal)	per oz.	0	2	6
Sodium (metal)	per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 %	nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 %	,,	4	5	0
,, ,, (Carb. Soda-ash) 48%	,,	4	0	0
,, ,, (Alkali) 58 %	,,	3	10	0
,, ,, (Soda Crystals)	,,	2	0	0
,, Acetate (ex-ship)	,,	14	5	0
,, Arseniate, 45 %	,,	14	10	0
,, Chlorate	per lb.	0	0	5
,, Borate (Borax)	net, per ton.	19	0	0
,, Bichromate	per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net pr. ton		9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ,,		8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ,,		7	2	6
,, ,, (60 % Caustic Soda) ,, ,,		6	2	6
,, ,, (pure liquor 90° Tw.) ,, ,,		3	15	0
,, ,, 77/78 % powdered (99 % hydrate)	,,	13	10	0
,, Bicarbonate	,,	6	10	0
,, Hyposulphite	,,	5	5	0
,, Manganate, 25%	,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool	per cwt.	0	7	9
,, Nitrite, 98 %	per ton	30	0	0
,, Phosphate	,,	12	10	0
,, Silicate (glass)	per ton	4	10	0
,, ,, (liquid, 100° Tw.)	,,	3	10	0
,, Stannate, 40 %	per cwt.	3	2	9
,, Sulphate (Salt-cake)	per ton.	1	1	0
,, ,, (Glauber's Salts)	,,	1	10	0
,, Sulphide	,,	6	15	0
,, Sulphite	,,	5	0	0
Strontium Hydrate, 100%	,,	8	0	0
Sulphocyanide Ammonium, 95 %	per lb.	0	0	6½
,, Barium, 95 %	,,	0	0	4½
,, Potassium	,,	0	0	6¾
Sulphur (Flowers)	per ton.	7	10	0
(Roll Brimstone)	,,	6	10	0
,, Brimstone : Best Quality	,,	4	15	0
Superphosphate of Lime (26%	,,	2	15	0
Tallow	,,	18	5	0
Tin Crystals	per lb.	0	0	4¾
,, English Ingots	per ton	62	10	0
Zinc Spelter)	,,	17	10	0
,, Chloride (solution, 100° Tw.)	,,	5	2	6

THE

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AND

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isements intended for insertion in the current week's issue ach the office by **Thursday morning** at the latest.

CURRENT TOPICS.

AT LAST.

IN some ways it is a strange coincidence that with the last week in the year we should be able to comment on two points which are both epoch marking. We will take them in turn, dealing first with the pending awakening of the Local Government Board familiarly known as the L.G.B.

For years we have hammered away at this stolid agglomeration of official incapacity, and during this time we have heard many happy if irreverent interpretations of these three familiar letters. At the commencement of the River Anti-Pollution Crusade conducted by the Joint Committee they were said to stand for L-axity, "G-as," and B-ounce, but as the question of river pollution has progressed it has been more truly rendered as L-ately G-reatly B-othered.

There is no gainsaying the fact that apart from the inherent difficulties of the river pollution problem, one of the greatest hindrances has been the hopeless apathy and incapacity of the L.G.B.

As the occasion has presented itself we have unflinchingly pointed out how, in the first place, their long-windedness was regularly counted on by local authorities as a sure means of killing time despite all the pressure the Rivers Joint Committees might have been exercising. In fact it is only common justice to add, that at many meetings several cases have repeatedly been nothing more or less than shelved, because the committees had done all they could, and to make progress would have had to undertake the work of the Local Government Board. This led to the Board being pressed to push on, and goaded as they were it is not so very surprising that they did not fail to make difficulties for the committees whenever opportunities occurred—and they were not infrequent.

In quite the youthful days of the Joint Rivers Committees we pointed out that if the Committees had their hands full, making authorities and manufactures adopt schemes, how could words be found to describe the congestion that would inevitably result at the central department when all these schemes had to be approved, and inquiries as to the necessary loans executed?

Apart, however, from the enormous clerical difficulties, matters have been aggravated by the antiquated notions that were adopted as guiding principles, and the lack of enlightenment on modern developments and requirements that has been evinced at every point.

A blind belief in the supreme infallibility of land filtration has compassed the discomfiture of the Board. The reasons for this indiscreet adherence to this form of filtration are plentiful, and condone the action of the officials, as of themselves. At one time it was a rock-based tenet, and men who are clerically worked to death cannot allow themselves to be deflected by every side wind that blows on them.

They are the flagstaff, as it were, and fly an important standard. Nevertheless, when the wind sits dead in one quarter, the stoutest flagstaff must either bend in that direction or the standard be furled. In the present case the latter could not be done, and so, after all, the alternative must result.

Only last week, through the agency of the member for Radcliffe the Local Government Board officials were compelled to see with their own eyes that a good effluent *can* be obtained even when land filtration, in the L.G.B. sense, is entirely dispensed with, and now that their eyes have seen, their other senses must be exercised, if merely for reputation's sake. In addition to this, the question of the unreasonable tax on the powers of the clerical staff is to be gone into. In 1889 the board had as much as, if not more than, it could do, and now with the close of 1896 we can record the fact that the Government has grasped the hopelessness of the present situation. In consequence the Treasury has appointed a Committee of the following gentlemen:—Sir John T. Hibbert, Mr. T. W. Russell, M.P., Sir Francis Mowatt, and Mr. H. W. Primrose. They will enquire into the sufficiency of the clerical and secretarial staff of the L. G. Board, and into the existing divisions of the work, the salaries of the officers, and the organization of the department generally, and will recommend what changes should be made in the existing arrangements. May these recommendations be made with reasonable promptitude, and executed with still more reasonable celerity.

ON THE THRESHOLD.

On Tuesday afternoon a most interesting and epoch-marking ceremony was performed in the opening of the Davy-Faraday Research Laboratory—the gift of Dr. L. Mond—by His Royal Highness the Prince of Wales. When the news of this munificent and prescient gift was made public, in July, 1894, we gave in this *Journal* a sketch of the aims and scope of this Laboratory. By the functions of Tuesday the prospective has become objective, and the inner portals of science have been opened a little wider to all those who are prepared to enter.

It will be a pardonable repetition if we here state that the new laboratory is for research in pure chemistry and physics. Only those will be admitted as workers who have already done original scientific work or who are fully qualified to undertake original scientific research in pure and physical chemistry. No person will be excluded from admission by reason of his or her nationality or sex. Also admission to the laboratory, and the supply of gas, water, and electricity, as far as available, will be free of charge.

The keynote of all the Anglo-Teutonic advice we have had upon scientific education has been—encourage research; and with his characteristic practicability Dr. Mond, two years ago, took the first step towards *doing* what has been so much discussed in the abstract during the past six months. Not only has he acted, but he has ensured the perpetuation of his generous wisdom by adding a capital sum of £62,000. to provide for the future maintenance of the laboratory. We need only add let such bountiful provision be productive of true, worthy, and lasting appreciation.

THE GOLD OUTPUT IN THE RAND.—The output from the Rand district during November, as cabled by the Witwatersrand Chamber of Mines, amounts to 159,744 ozs. This total, however, is exclusive of the returns of several companies which, under the title of the "Association of Mines of the South African Republic," give their joint output as 41,369 ozs. The month's production is, therefore, 201,113 ozs., and shows an increase of 1,224 ozs. as compared with the previous total, and an increase of 5,895 ozs., as compared with the corresponding month of 1895.

OPENING OF THE DAVY-FARADAY LABORATORY.

AS might have been expected, the opening of the Davy-Far Research Laboratory on Tuesday afternoon, by His Royal H ness the Prince of Wales, brought together a brilliant crowd of s tific notables. This Laboratory, which forms an annexe to the the Royal Institution in Albemarle-street, has been purchased, f up, and endowed at an expense estimated at not short of £100, by the generous munificence of Dr. Ludwig Mond, the well-kn chemist, and a partner in the firm of Messrs. Brunner, Mond, Company, Limited. The Royal Institution, founded just a hun years ago by Count Rumford, has been the scene of the famous i tigations and discoveries of Humphrey Davy, of Michael Farad Thomas Young, of John Tyndall, and also of John Hall Gladsto Lord Rayleigh, and of James Dewar, who are still happily am the living. The Friday evening discourses inaugurated by Fa still draw large audiences during the season to learn the latest coveries in science, while the set courses of lectures are always attended. Its laboratories, from which so many famous disco have issued, are not large. They are not used for teaching, no p sion being possible for students to work there. They have essentially the quiet retreat of the professor for the purpose of his investigations. With them will ever be associated, in partic the names of Davy and Faraday. It was here that Davy a host of brilliant chemical and electro-chemical discov including the first production of the electric arc It was here that Faraday for thirty years continue pour out the fruits of his incessant and self-denying labours, incl the discovery of magneto-electric induction—the principle of the dy which generates electric currents by mechanical power,—and of other phenomena of magnetism and electricity that made his immortal. Very fittingly, therefore, have the names of Davy Faraday been joined in the name of a new laboratory designe research in chemistry and chemical physics. Dr. Mond, in the ment which he read to the Prince, described the aims of the Laboratory, which is to be devoted exclusively to research in domain of the borderland of these two sciences, a borderland in w vast fields of unexplored nature lie open to discovery by the exp But for research of this kind the explorer must have not only requisite preliminary training—the best that the modern universitie give—but needs also the best and most modern appliances instruments. These have been procured for the new Laboratory unstinted hand, all the instruments being of their kind the bes curable. Though by no means large, the new Laboratories afford convenience that could be desired. Thoroughly trained worke physics and chemistry who may have shown themselves compete undertake original research will be admitted free, and provided gas and water and allowed such instruments as they require in investigations. No restrictions as to sex or nationality will debar competent investigator from benefiting by the new Laboratory. A there will be no students admitted—if the word student is used ordinary sense as one merely in the stage of qualifying himself fo knowledge already acquired. Ripe workers, not raw students needed for research.

In replying to Dr. Mond's address, the Prince of Wales congratu the members of the Royal Institution on this most important acce to its premises. Not only are these laboratories now added, but additions have at the same time been made to the library and rece rooms of the Institution.

Further particulars of this Laboratory may be found in the *Jo* (372, p. 6), while elsewhere in this issue there is an editorial r ence to the subject.

THE AFFAIRS OF T. FINDLATER AND CO.—An adjourned mee of the creditors of Thomas Findlater and Co., oil merchants, Vict street, Manchester, was held on Friday last week, at the rooms of Society of Chartered Accountants, King-street. The creditors pass resolution requiring the debtor to execute a deed of assignment to trustee (Mr. J. Kerr, of Messrs. John Kerr and Co., chart accountants, Manchester), who will act under the supervision committee of five creditors.

Obituary.—By the death of *Mr. Thomas Roberts*, which place last week at the Hollies, Kersal, Manchester loses an old much respected citizen. During a long life he was engaged, in a way, in more than one department of public work, and the flag pl at half-mast at the Royal Infirmary reminded the public of his connection with that institution as a life governor. Mr. Roberts in business many years ago, being a member of the firm of Ma Mottershead and Roberts chemists, in the old Market Place, and, head of the well-known firm of Roberts, Dale, and Co., chem manufacturers, Cornbrook, Manchester, and Warrington.

The Patent List.

is list is compiled from Official sources in the Manchester ical Laboratory, under the immediate supervision of e E. Davis and Alfred R. Davis, who report professionally the value of Chemical Patents.

PPLICATIONS FOR ENGLISH LETTERS PATENT.

ial Stone. C. and A. Musker. 27,835. December 7.

ovements in the Manufacture of Iron and Steel. C. Stobrawa. ,874. December 7.

Soap or Soap Powder. F. W. Wright and the United Alkali Co., Ltd. ,906. December 7.

ying Oils. F. B. Aspinall and G. Wise. 27,923. December 7.

ving Deposits from Settling Tanks. F. P. Candy 27,969. Dec 8.

making Cement. S. R. Thompson. 27,975. December 8.

ying and Revivifying Confined Atmospheres. E. Manville and von Buch. 28,050. December 8.

icing Carbon Dioxide Gas. G. Sisson. 28,163. December 9.

ing Nitrogenous Substances to Manufacture Ammonia. H. H. ake. 28,119. December 9.

saives. G. Beneké. 28,220. December 10.

ying the Atmosphere. A. Kornfeld. 28,281. December 10.

es for the Electro-deposition of Nickel. T. R. Canning. 28,288. ecember 10.

ss and Apparatus for Obtaining Common Salt and other like alts from Solutions. E. A. Goddin and R. Lees. 28,294. December 10.

ge Batteries. R. Kennedy. 28,314. December 11.

vering Ammonia from Producer, Blast Furnace and other Gases. . Twynam. 28,322. December 11.

ratus for Inhaling Oxygen Gas. F. W. Branson. 28,342. Dec. 11.

g Apparatus. O. Schmeisser. 28,414. December 11.

dary Batteries. L. Lucas. 28,511. December 12.

BSTRACTS OF LATEST COMPLETE SPECIFICATIONS.

ese abstracts are specially prepared for the Chemical Trade Journal, ALL RIGHTS *of publication are* RESERVED. *This is the earliest of abstracts of Chemical and allied patents accessible to the .*

ovements in and Apparatus for Refining Crude Petroleum and nalogous Oils by means of Fuming Sulphuric Acid. J. Y. Johnston, , Lincoln's Inn Fields (communicated by Badische Aniline and Soda Fabrik, udwigschafen a/Rhine). Eng. Pat. 23,436. December 6, 1895.

nong the several difficulties experienced in the treatment of leum with fuming sulphuric, one principal cause of failure has the lack of means for bringing the oil into close contact with the This invention relates to apparatus for accomplishing this. The ng acid is caused to pass between two streams of oil, moving at ent velocities, and so reducing the acid to a state of fine division ie time of contact with the oil. A special form of injector is ibed and illustrated as part of the necessary apparatus. The ment of various petroleum products is detailed at some length. general scheme seems to be to add about 0·25 % of 96 % H_2SO_4, blow with air so as to remove all traces of water, and then treat the fuming acid in varying proportions, wash with alkali and r, etc , in the usual way. There are two figures.

rovements in the Apparatus for Treating Smoke, Fumes, Vapours, nd the like. A. Moodie, 41, Alkham-road, Stoke Newington. Eng. Pat. 33. January 3, 1896.

roadly speaking, the centrifugal hydro-extractor principle is applied ie washing of smoke A bottomless cage of perforated plate or e is substituted for the usual basket, and the upper portion of the et entirely closed by a division plate. The bottom of the cage is ed with water, and the smoke, admitted into the intervening space, ashed by the spray caused as the cage rotates, and passed by a ral passage into the upper portion of the jacket, there escaping by utlet pipe. Six figures accompany the specification, which is of a ly mechanical nature.

rovements in Apparatus for Degreasing or Cleaning Wool, Cotton Waste, and like Fibrous Material. F. N. Turney, Whitemoor Leather Works, Nottingham. Eng. Pat. 1,370. January 20 1896.

his is an addition to Patent 14,978, 1895, referred to in the *Journal*, 478, p. 33, and in connection with the degreasing of wool, etc., cribes an arrangement of an elevating belt and levelling device, in pour tight chamber or casing, by means of which the material is ed into a sheet or layer, and transferred to the degreasing chamber. en claims are made, and there are three drawings.

Improvements in Processes for Producing Chemical Combinations from Raw Wool Fat. C. Schmidt, Magdeburg, Buckau. Eng. Pat. 17,379. August 6, 1896.

The object is to produce acid wool fat free from sebacic acid; high melting combinations of sebacic acid suitable for candle making; and lanoglycerine, a product obtained by the purification of the fatty alcohols of the wool fat. These steps are effected as follows:—(1) The neutral wool fats and sebacic acids are separated by distillation or treatment with alcoholic ammonia; (2) the mixture of sebacic acids and fat alcohols is separated into nearly pure sebacic acids and fat alcohols by taking advantage of the insolubility of alkali or metal soaps in acetone and similar solvents, thus ultimately obtaining combinations melting at 60° to 75°C; (3) clarifying the fat alcohols by kneading and boiling first with dilute alcohol, and then water to produce "lanoglycerine."

Improvements in the Manufacture of Caustic Soda. Carbonate of Soda and Sodium Sulphide. H. R. Angel, 7, St. Helen's-place, London, E.C Eng. Pat. 335 January 6, 1896.

These products are obtained as by products in the smelting of refractory ores. Sodium sulphate, nitre cake, or carbonate of soda, is mixed with lime blend ores, coke and iron oxide, and smelted in a cupola by the aid of mixed steam and petroleum vapour. The soda is reduced by the carbon to sulphide; the iron oxide, with the lead and lime, change the sulphide into Na_2O, which is recovered as caustic by running the slag into water, after the metals have been smelted out. If roasted ores are used part of the soda is carbonated by the CO_2 from the coke, and the solution obtained from the slag is free from sulphide, consisting of three-quarters caustic and one quarter carbonate of soda.

An Improved Process for the Treatment of Carbide of Calcium. M. P. M Letang, 272, Faub. St. Honoré, Paris. Eng. Pat. 21,572. September 29, 1896.

Carbide of calcium is very sensitive to damp, and as it is decomposed by water this is a drawback. It also leaves a residuum of damp lime, which chokes the openings in acetylene generators. It is proposed, therefore, to paint or coat the carbide with a composition, consisting of glucose, 55 parts; petroleum, 5 parts; and powdered chalk, 40 parts. Various alternative preparations and methods of application are described.

Improvements in the Treatment of Ground Slags intended for Use as Fertilizers. C. H. and A. W. Langdale, of 10 Winchester-terrace, and 2, Claremont-villas, Forest Hall, both of Newcastle-on-Tyne. Eng. Pat. 22,666. October 13, 1896.

To lessen the dust in spreading basic slags they are moistened with a brine, composed of sulphate or chloride of magnesium. Owing to the deliquescent nature of the latter salt it is especially suitable for the purpose, but in either case the added water is more evenly retained than when plain water alone is used.

An Improvement in the Manufacture of Soaps. F. M. Sanders, 79, Colmore-row, Birmingham, and the Digby Patents Co, Limited, Birmingham. Eng. Pat. 19,257. September 1, 1896.

During the preparation of various soaps very finely ground oyster shells are incorporated. The shells must be reduced to an impalpable powder. In this way the soap acquires considerable detergent powers, while its production is cheapened.

A New or Improved Apparatus for Estimating the Carbonic Acid Gas, or other Constituents in Gases, or Products of Combustion. G Craig Lugar Ironworks, Cumnock. N B. Eng. Pat. 22 303. November 22, 1895.

This apparatus consists of two revolving measuring vessels, or gas meters, with dial faces and indicators, an absorbing chamber, and an aspirator. It is primarily intended for estimating CO_2 in fuel gases. The gas is measured in through one meter, passes the absorber, and out through the second meter to the aspirating chamber. The difference in the readings shows the percentage of CO_2 It is applicable to absorbable gases. There is one figure. A full description of this apparatus was given in the *Journal*, No 452, p. 45.

MAYPOLE SOAP.—Amongst the gold medal and other awards given at the late India and Ceylon Exhibition, London, and various other exhibitions, it is worthy of note that Maypole soap has been foremost amongst those so favoured, having been awarded the following medals and diplomas:—India and Ceylon Exhibition, London, bronze medal and diploma; Great Yarmouth Exhibition, gold medal; Middlesbro' Grand Trades and Arts Exhibition, diploma; East London Trade Industries and Arts Exhibition, diploma. Such successes as these are not surprising. Maypole soap being unique—it not only washes but dyes any colour—and is entirely of English manufacture, and everything connected with it even to the management is English.

Official Memoranda.

(From the Board of Trade Journal.)

CUSTOMS TARIFF OF VICTORIA.

(Concluded from p. 322.)

The following is an abstract of duties leviable on imported goods:—

Sulphuric acid	1s. per cwt.
Tobacco, etc., for sheepwash, etc.	*Free.*
Varnish	2s. per gallon.
Washing powders	*Free.*
Paraffin wax	1d. per lb.
White lead (dry)	£2. per ton.

GERMAN FREIGHTS FOR MANURES.

A despatch has been received at the Foreign Office from Sir Frank C. Lascelles, stating that a notice has appeared in the *Reichsanzeiger*, to the effect that the Prussian Government have agreed, in view of the depressed condition of agriculture, to extend the 20 per cent. reduction in freights for manures which was granted on the State Railways from March 1st, 1895, to May 1st, 1897, for a further period of five years.

CALCULATIONS OF DUTY ON PETROLEUM.

According to a Customs circular issued by the Government of India, the Government of Bengal, in March, 1896, referred for orders a representation made by the Calcutta agent of the Standard Oil Company of New York on the subject of the calculation of the contents of kerosine oil cans for the purpose of the levy of import duty on the oil. He objected to the practice at Calcutta of assessing the duty on an assumed quantity of 8⅓ gallons in each case of two cans, and suggested that either the quantity to be assumed should not exceed 8 gallons to the case, or the quantity should be actually measured. The Board of Revenue, having ascertained that at Bombay it was the practice to assume 8 gallons as the contents of a case, recommended that either weight, not volume, might be taken as the basis in estimating quantity, or the quantity might be determined, as a basis, by the examination of a few test cargoes.

It will be best, in the opinion of the Governor-General in Council, that the assessment of mineral oil to duty should be based on actual measurement instead of assumptions. As it seems from the experience at all ports other than Calcutta that there is no special difficulty in actual test, and as moreover bulk oil, which competes with case oil, is assessed on the basis of actual measurement, his Excellency in Council is of opinion that in future importations of mineral oil in cases should be assessed to duty on the test of a certain number of cases in each consignment. The local authorities will determine in each case what percentage of cases need ordinarily be tested.

CARBONATE OF POTASH imported into the U.S.A. is dutiable at 25% *ad valorem* as a chemical salt.

THE PETROLEUM TRADE OF THE EAST.

The New York *Engineering and Mining Journal* is of opinion that a change is gradually going on with regard to petroleum markets which is of some importance to American producers. American petroleum a few years ago constituted the entire supply in the markets of India, China, and Japan. It has been to a very considerable extent replaced in those countries by Russian oil, and the trade is now being further divided by the active competition of new fields. Langkat oil now holds almost as great a share of the Chinese trade as the Russian product, and the other newly opened fields of Borneo, Sumatra and Java are making rapid progress. Although the Japanese oil wells have not done as well as was expected, they furnish a considerable part of the home supply. It looks very much as if the Far East would, in a few years, cease to be a customer for American oil, and would take its supplies entirely from the new fields which are now in course of development.

THE TANNING INDUSTRY OF INDIA.

The tanning industry in British India has now assumed important dimensions. The value of last year's exports of tanned skins and hides by sea to foreign countries aggregated over four crores, indicating, after a steady annual expansion, an increase of 42 per cent. within the past five years. The trade is one in regard to which there seem to be prospects of still further development on a large scale. In the case of finished leather goods, a very general impression has hitherto prevailed that English leather was infinitely superior to the Indian article, and to *a great extent Government and private* purchasers have been content to *pay the considerably higher cost of* British-made articles in the belief that they were getting relatively better value for their money. T however, can no longer be accepted as a general rule, practical perience in numberless instances proving the contrary.

The foremost leather manufacturers in India keep well abreast of time, and have shared in all that the application of modern science done for the tanning industry. Recent comparative experiments m taken in England between artillery harness made of Indian lea turned out in the Government harness and saddlery works at Cawnp and the same made in England of home-produced leather, passed former to be the stronger; and, presumably, there could hardly have b a severer test. Cawnpore is the centre, no doubt, of a great lea industry, but one which is probably only in its infancy as yet. Op tions locally are, in the meantime, apparently confined to the p duction of material sufficient in quantity to meet the demands manufactured articles. In the foreign export trade in tanned h and skins Madras stands far to the front: five-sixths of the total exp from India being shipped from that seaport, the tanned good the Southern Presidency finding, it is said, a better market in Eu than any other province. Other provinces, in fact, export hides skins largely to Madras, but it is not likely that the advantage w that Presidency has hitherto enjoyed in the superior description tanning bark produced in Southern India will long survive the in introduction of other tanning materials which, as far as reagents concerned, place all provinces on a par.

SOCIETY OF CHEMICAL INDUSTRY.

NOTTINGHAM SECTION.

THE second meeting of the session of the local section of the S Society took place on December 16th, at the Midland H Derby, when there was a good average attendance, notwithstan the dense fog that prevailed over a wide area, and which delayed trains. Amongst those present were Mr. F. E. Lott, from Burton Trent; Messrs. L. Archbutt, F. J. R. Carulla (chairman), S Herriott, T. A. Southern, and John White, Derby; Messrs. S. Burford and Thomas Reader Smith, from Leicester; and Messrs. M. Caven and Joseph T. Wood (hon. sec.), from Nottingham. A p was first read by Mr. R. M. Caven, written by himself and Mr. Al Hill, "On some properties of certain metallic phosphates;" a which the Chairman said, that although the subject was of great inte to analytical chemists, and they had there at least three gentlem namely Messrs. Lott, White, and Archbutt, especially competent discuss the matter, yet, as they had down for reading a paper of m importance to the town of Derby on the sewage question, he thou it better to postpone any discussion on the first paper till next meeting.

Mr. Thomas Reader Smith then read the paper, prepared in c junction with Mr. S. F. Burford, on

THE FILTRATION OF SEWAGE THROUGH COKE BREEZE.

The authors consider that failures in the use of coke as a filter medium are due to the filters having been too small and the pieces coke too large. At the Kettering Sewage Disposal Works, acting the lines recommended by Mr. Dibdin, the experimental filter m measures 21ft. × 10ft. × 3ft. deep. The coke used is the size walnuts. In the experiments recorded the filter was charged with t effluent, after precipitation with lime and alumino-ferric, the quan dealt with being about 2,000 gallons in each filtration of 2½ ho Lengthy tables of analytical results are given, and further experim described when carbferalum was substituted for the alumino-fe The important result is recorded that during the course of these exp ments there never was any indication of putridity, and that when filter was broken into the coke was found to be absolutely free from putrid odour, the effluent in all cases being clear and comparatively from smell.

Mr. John White said that with such a vast number of figures it difficult to discuss the paper without giving them careful considerati He was struck however with the very irregular manner in which diminution of the ammonia was brought about.

Mr. F. E. Lott referred to similar experiments which he had carr out five or six years ago. His experience was that sewage requir considerable amount of separation. He would ask whether the sew they worked upon was allowed to settle before treatment with chemic

Mr. Wood remarked that it had been observed that sewage fr tanneries and leather works, which had been treated with s quantities of chemicals, became thereby more offensive. It was kn in bacteriological work that small quantities of antiseptics were actually to increase the activity of the bacteria rather than otherw and possibly a similar action occurred with lime.

The Chairman observed that that was a very important statement.

Mr. Archbutt agreed with previous speakers that it was impossi to discuss such a mass of figures at a few minutes' notice. To his m some of the figures appeared to indicate that putrefaction was going

r. Burford and Mr. Reader Smith both replied, the latter gentle- stating, with reference to the amount of sludge precipitated, that had 80 tons per day, representing 8 tons of pressed cake.
he Chairman said it was not usual to pass votes of thanks to bers for reading papers, but he felt that everyone present would obliged to the various authors. The sewage question was of the test importance to them in Derby. Both the Derby Town Council the County Council, though at loggerheads on the subject, might learn something on the matter, and he was only sorry that they not had any town councillors there that evening, as they might asked some questions to elucidate the points in dispute.
r. T. A. Southern, as a visitor, desired to be allowed to express hanks to the readers of the papers, especially for that on the ge question, which was of such great importance to this town.
ter the announcement that the next meeting of the section will place on January 27th, at Burton-on-Trent, the proceedings inated.

Reports of Companies.

NEW TAMARUGAL NITRATE COMPANY LTD.

r Francis Evans, M.P., presided last week at the Cannon-street el over the annual general meeting of this company, and, in moving adoption of the report, observed that the shareholders could not been astonished at the result of the past year's working, remem- g the state of the nitrate trade during the last 18 months. The ination which was formed last spring was not made in time to ent the decline of prices, which, however, had since improved. ading the sum of £16,230. brought forward, the net profit for the ended July 31 last was £42,481., and, after providing for the nture service fund, and deducting £8,000. written off the cost of new grounds purchased from the Chilian Government, there ined a balance of £11,000, which the directors had thought it able not to divide. When they acquired the new grounds they not intended to pay for them at once. The purchase had been a nate one for the company, as it was through the new grounds they had been able to make the showing they had done, and h they would be able to submit for the shareholders next year, as of the production was already sold for the current 12 months. balance of £21,690 owing to the Chilian Government for the te grounds purchased from them was paid on October 15 last. had had to pay £23,400. for the debenture service fund. They not been able so far to borrow a loan on the new grounds, which had now paid for. This, of course, had been a heavy tax on . It was proposed to make the loan for a reasonable amount con- nal upon its repayment over a sufficient number of years, so as not espass on the profits, and to pay it all off before the grounds were usted. Negotiations with this object were in progress, and ey came to a successful issue the profit and loss account and the al would be released from a heavy charge. Although they had a large sum for their property they had divided over £250,000. g the shareholders, whom he did not wish to lose confidence in ompany. The motion was seconded and carried.

CAPE COPPER COMPANY, LTD.

he ninth ordinary general meeting was held on Wednesday last at Cannon-street Hotel. Mr. E. A. Pontifex, who presided, d that the net profit for the year amounted to the considerable sum 131,252., as compared with £125,421. in the previous year, an ase of £5,831. The comparison of the real results, however, was more favourable than these figures indicated, inasmuch as the ts of 1895 were swollen by the exceptional payment from the été des Métaux of £7,201., which did not belong to that year, and profits of the present year had been depleted by the also exceptional of £4,500. due to the defalcations of the late transfer clerk. If these items were eliminated, the profit earned in the past year would be in ss of that of the previous year by £17,532, The price realised for copper had been 7s. $\frac{1}{16}$d. per unit in 1895 and 8$\frac{5}{16}$d. in 1896, valent to an increase in price in the last named year of $\frac{3}{4}$d. per unit, amounting in value to £14,529. Their smelting works in Wales nued to be conducted at a considerable profit, though he was ned to think that part of it should properly be credited to the s, and especially to the Tilt Cove mines, which, he was pleased to showed a further improvement. In view of the diminution of the rtained and visible reserves of ore at Ookiep, and their possible ustion at some future, but he hoped long distant, period, the policy he directors in augmenting the reserve and sinking funds to the nt of £40,000. would, he thought, be approved. He concluded by ing the adoption of the report, which was seconded by Mr. Hanbury lay, and agreed to.

LAGUNAS NITRATE COMPANY, LTD.

The annual ordinary general meeting of this Company was held last week at the Cannon-street Hotel. Mr. Henry W. Lowe, who presided, stated that in the readjustment of the stocks the directors had been obliged to waive the balance of profit brought forward from last year. He might explain, in connection with this point, one item in the balance sheet with reference to an amount of 41,000 quintals of nitrate which had disappeared from the stock. It was almost impossible for so large an amount to have been taken away surreptitiously, and the conclusion the board had come to was that it had only existed in the manager's imagination. This loss in the stock represented £3,000. by which amount the stock had been reduced. Other large sums had been written off stocks and stores, because the directors had found that certain items in the books had been considerably overstated. They had considered it their duty to revise these items carefully and to bring things down to their present market value. In consequence of these writings down it would not be necessary in the future to allow anything like so much for depreciation as had been allowed in the past. One item in the balance sheet might be misleading—namely, "hotel and equipment"—and he therefore thought it right to state that the hotel was merely a house built for the men in which to take their meals. A fair profit had been made by the hotel, and this went to the depreciation account. With respect to the item of "nitrate afloat and in warehouse," £112,381., it had been taken at cost price, and it would show a fair profit even if sold at the prices ruling that day. If, however, they waited until March or April, which was the time of consumption, the directors anticipated that they would be able to double the profit. The item of loss on exchange would not appear again in the accounts, the directors having made arrangements to prevent it. The oficina was in first rate condition, and the directors looked with some confidence to the future working of the company. They had disposed of almost all their manufacture at a considerable profit, and they would endeavour to divide a portion of the profit as early as possible. He had not intended to allude to the litigation between the syndicate and the company, but, in view of what the chairman of the former had stated at his recent meeting, he himself thought it right to state that their company had made no offer of compromise or amalgation, although he would not say that the directors might not be willing to accept a compromise if such a course did not affect the company's rights. This, however, would be a matter for the shareholders to decide upon. He concluded by moving the adoption of the report, which was seconded and carried.

HOIST WITH THEIR OWN PETARD.—By a lamp accident in New York, Mr. Aaron Goldsmith, a wealthy wholesale liquor dealer, his wife, and their three children, have been burnt to death.

THE POLLUTION OF THE RIBBLE.—On Friday last week, in the Queen's Bench Division of the High Court of Justice, Mr. Justice Wills and Mr. Justice Wright gave judgment in the appeal by the Croston District Council against a judgment of the Lancashire County Court judge sitting at Chorley. The District Council had submitted to a consent order obtained by the Joint Committee of the River Ribble by which the Croston Authority was to erect certain works to prevent the sewage of their district from polluting the Yarrow and Ribble. After the order had been made, the Authority discovered that part of the Yarrow to which the order applied was tidal, and therefore to that extent the order was bad and inapplicable. The Joint Committee instituted an action for penalties, which the County Court judge imposed to the extent of £114., equal to a rate of 5d. in the pound on Croston. An appeal was made, and judgment was now given. Their Lordships held that if the order was based on a mistake in fact, the proper remedy was to bring an action to set it right, and not to appeal against an order to which consent had been given by the appellants. The appeal was dismissed with costs.

A FATAL EXPLOSION OF ACETYLENE. — An explosion of acetylene gas, resulting in the death of four persons, took place in the Berlin suburbs, on Saturday afternoon last. As the use of ascetylene gas is prohibited in Germany, owing to its explosive character, a chemist, named Isaac, had for some time past been making experiments with a view to deprive it of that dangerous quality, and had succeeded so well that he was recently in a position to show his invention to several high officials, who were greatly struck by it. The head of the Imperial railways expressed a desire to see the process in Herr Isaac's laboratory, and the inventor, who had hitherto made experiments only on a small scale, made preparations to show a large quantity of his safe acetylene gas. He accordingly compressed it in a large iron or steel tube by the enormous pressure of about one hundred atmospheres, and the tube exploded, blowing him and three of his workmen to pieces, and causing a report which was heard within a wide circuit. As all persons engaged in the laboratory have lost their lives there is no clue at hand calculated to show the immediate cause of the catastrophe, and the discovery itself was the secret of the inventor who has perished.

THE BRITISH CHAMBER OF COMMERCE IN PARIS.

WHAT THE CHAMBER DOES FOR ITS MEMBERS.

WE are requested by the Secretary of this Chamber to give publicity to the following statement, which appears to fully justify the request. The Chamber is situate at 25, Boulevard des Italiens, Paris.

Information as to standing of Firms.—The Chamber procures on application, and supplies gratuitously to its members, but without any guarantee whatsoever, strictly confidential information in regard to the standing, credit, and reliability of French firms with which they may be doing or intending to do business.

Agents and Representatives.—It affords special facilities to British firms desiring agents and representatives in Paris and France generally by placing them in communication with firms or individuals likely to do business for them; and, when required, by submitting, without responsibility, lists of people applying at the Chamber for the Paris representation of British houses.

Estimates for Translation of Catalogues.—It procures, on application, estimates for the translation of catalogues or circulars at the lowest cost by responsible translators, and also, if required, estimates for the printing of such catalogues or circulars by French houses

Lists of Firms engaged in particular trades.—It provides from the most reliable sources the names of some of the principal firms engaged in a particular trade, not only in Paris, but all over France, and also gives members the means of obtaining comprehensive lists for the sending of catalogues and circulars, if required.

Intervention on behalf of Members with French Customs.—It intervenes with the highest Customs authorities on behalf of its members when they have *primâ facie* a reasonable case, in which goods have been too highly taxed, and can point to a useful record of favourable decisions obtained.

Representations to Home Government on behalf of Members.—It upholds the interests of British traders with France by representations to the Home Government in cases when legislation is apprehended which might be contrary to their interests, or when legislation is required for their benefit.

Arbitration.—It has provided means for the settlement of trade disputes by arbitration, for which it has established a code of procedure. In conjunction with the Foreign Chambers of Commerce in Paris it has established an International Board of Arbitration to settle commercial disagreements that may arise between the citizens of the various countries [illegible] such citizens and foreigners.

[illegible] holds at the disposal of its members for reference the [illegible] valuable set of Directories of important British [illegible] that in future imposes for the purpose of deciphering Code [illegible] duty on the test [illegible] ks of reference and official publications [illegible] The local authorities [illegible] nments is open to members within office [illegible] need ordinarily [illegible] sh and French trade papers are also [illegible] at the disposal of members.

[illegible] *slation.*—When legislation affecting [illegible] POTASH imported [illegible] mercial or otherwise, of the English [illegible] nical salt. [illegible] by the French Government, the [illegible] for the benefit of members legal [illegible] PETROLEUM TRADE [illegible] on, and such opinion is published [illegible] the shape of special circulars. [illegible] *Engineering and Mining* [illegible] on the French Nationality [illegible] going on with regard to [illegible] rance, the Law in regard to [illegible] to American producers [illegible] in France, etc., published [illegible] ited the entire supply [illegible] It has been to a very cons[illegible] Russian oil, and the trade [illegible] competition of new fields.

MINERALS.

[illegible] of the Chinese trade as [illegible] ened fields of Borneo, Su[illegible] l statistics have been [illegible] Although the Japanese [illegible] rendered the task of [illegible] ted, they furnish a considera[illegible] following particulars [illegible] uch as if the Far East wou[illegible] United Kingdom and [illegible] American oil, and would [illegible] elds which are now in course [illegible] e forty-one different [illegible] £69,129,664, as

[illegible] NING INDUSTRY OF [illegible] rt of *Coal* raised is [illegible] in British India has now ass[illegible] e raised has been [illegible] of last year's exports of tanned [illegible] h show a marked [illegible] ries aggregated over four crores, in [illegible] first time, stands [illegible] ion, an increase of 42 per cent. [illegible] y increase in the [illegible] e is one in regard to which the[illegible] *Petroleum* has [illegible] r development on a large scale. In [illegible] oth Russia and [illegible] a very general impression has hitherto [illegible] d total. The [illegible] a infinitely superior to the Indian artic[illegible] almost insig- [illegible] ment and private purchasers have been co[illegible] the figures [illegible] higher cost of British-made articles in the [illegible] d by one

firm at Foyers. Among items for which no information a amount produced is available, it may be noted that *Bitu Potassium* are produced at Patricroft. During the year 1895 no *Nickel*, *Cobalt* or *Wolfram Ore* raised. There is no *Quicksi* duced in the United Kingdom. The total amount imported was 3,724,053 lbs. as compared with 3,843,791 lbs. in 1894. produced at three works, the same as in 1894. There is a increase in the production of *Strontium Sulphate*, the amou nearly double that raised in 1894, the total for 1895 being th on record if an exception is made in the case of the two years 1887.

In the table that follows the quantities and values for 1895 a while, for the purposes of comparison, the totals for 1894 a The values for 1894 and totals for 1893 can be found in the *Jou* 430, p. 243. Several items do not appear in the general sum appeared in 1894. Out of the old items eight show an in compared with 1894. Among the new items *Plumbago*, *Quar Sandstone*, and *Clays* may be mentioned, the latter including clay, fullers' earth, and china clay. The following are turns:—

TABLE I.

GENERAL SUMMARY OF THE MINERAL PRODUCE OF UNITED KINGDOM AND THE ISLE OF MAN.

Description of Mineral.		Quantity.	Quantity.	Va
		1894.	1895.	
Alum clay (bauxite)..	Tons	7,970	10,408	
Alum shale	,,	3,972	2,063	
Arsenic	,,	4,801	4,798	
Arsenical pyrites....	,,	3,288	2,951	
Barytes	,,	20,656	21,170	
Bog ore.....	,,	7,803	5,652	
Chalk	,,	—	2,924,235	
Chert and Flint	,,	—	94,787	
Clays.....	,,	3,263,768	9,796,086	1,
Coal	,,	188,277,525	189,661,362	57,
Copper ore	,,	5,752½	7,531	
Copper precipitate ..	,,	241½	260	
Fluor spar.....	,,	126	36	
Gold ore	,,	6,603	13 266	
Granite.....	,,	—	1,667,766	
Gravel and sand	,,	—	1,014,477	
Gypsum	,,	153,450	177,892	
Iron ore.....	,,	12,367,3 8	12,615,414	2,
Iron pyrites	,,	15,523	9,048	
Jet.....	Lbs.	479	168	
Lead ore	Tons	40,599½	38,412	
Lignite	,,	334	—	
Limestone (other than chalk)	,,	—	9.525,039	1,
Manganese ore.....	,,	1,809	1,273	
Ochre, umber, etc. ..	,,	8,516	7,625	
Oil shale	,,	1,986,385	2,246,865	
Petroleum.....	,,	49	15	
Phosphate of lime ..	,,	700	500	
Plumbago.....	,,	—	40	
Quartz	,,	—	724	
Salt	,,	2,235,912	2,173,253	
Sandstone.....	,,	—	4,230,526	1,
Slag	,,	—	134,882	
Slate and slabs	,,	461,673	581,760	1,
Soapstone	,,	10	—	
Strontium sulphate ..	,,	6,823	12,273	
Tin ore.....	,,	12,910	10,612	
Uranium ore.....	,,	19	40	
Whinstone, Basalt, etc.	,,	—	1,728,350	
Zinc ore	,,	21,821	17,478	
Total values		—	—	£60,

An inspection of the detailed returns shows that *Salt*, though l in 1895, is still in advance of the productions since 1888, the exception of 1888, 1884, 1883, and 1882 the total valu lowest on record. *Gypsum* shows a substantial advance.

In addition to the general summary the returns contain m details of the items given in Table I, from which we have c following:—The highest monthly price for best selected British in 1895 was £52, and the lowest £42 5s., the average price year being £47. 1s. 4d., while the corresponding figure f bars was £43. 2s. 8d.

Some interesting figures as to the amount of *burnt cupreous iron pyrites* which have been treated at the 15 different extraction works are supplied by Mr. Bird, of Liverpool. The total amount of burnt ore treated in 1895 was 357,365 tons, the estimated yield being 1,643 ozs. of gold, 285,891 ozs. of silver, and 12,864 tons of metallic copper.

The following table shows the amount of manganese ore imported into the United Kingdom, the ore being obtained solely from foreign sources :—

TABLE II.

MANGANESE ORE IMPORTED INTO THE UNITED KINGDOM.

Countries whence Imported.	1895. Quantity.	1895. Value.
	Tons.	£
From Australasia	412	855
British North America	—	—
Russia	65,474	144,961
Sweden	3,425	8,175
Belgium	150	450
France	5,260	11,733
Italy	—	—
Portugal	2,837	7,092
Spain	8,216	18,235
Turkey	13,216	27,057
United States of America	—	—
Chili	16,277	42,834
Other countries	16,252	35,556
Totals	131,519	£296,948

The following record of the imports of iron pyrites, and the countries whence imported, is useful and interesting :—

TABLE III.

IMPORTS OF IRON PYRITES INTO THE UNITED KINGDOM.

Year.	Norway.	Portugal.	Spain.	Other Parts.	Total Quantities.	Total Value
	Tons	Tons.	Tons.	Tons.	Tons.	£
1895	11,640	8,030	546,640	16,153	582,463	987,165
Previous year..	3,340	20,005	570,049	22,656	616,050	1,049,311

In the following table the details of the production of oil shale are given. The output is only that of mines under the Coal Mines Regulation Act, and so the total falls slightly below that given in Table I. :—

TABLE IV.

PRODUCTION OF OIL SHALE.

County.	Quantity.	Value at the Mines.
ENGLAND.	Tons.	£
Staffordshire, North	3,552	2,431
Yorkshire, East and West Ridings	6,172	
Totals	9,724	2,431
WALES.		
Flintshire	917	229
SCOTLAND.		
Ayrshire and West Stirlingshire	1,442	559,056
Edinburghshire	819,886	
Fifeshire	—	
Lanarkshire (East)	82,582	
,, (West) and Renfrewshire	22,209	
Linlithgowshire	1,301,308	
Renfrewshire (*included with West Lanarkshire*)	—	
Stirlingshire (East)	8,705	
,, (West) (*included with Ayrshire*)	—	
Sutherland	92	
Totals	2,236,224	£559,056

In Table V. the imports of Phosphate of Lime referred to above are given in detail, and, it will be seen, are of much greater importance than the bare statement of the home production given in the general summary. Algeria and the British West India Islands alone show an increase. The most notable decrease has been at British North America :—

TABLE V.

IMPORTS OF PHOSPHATE OF LIME.

Countries whence Imported.	1894. Quantity.	1895. Quantity.
	Tons.	Tons.
Belgium	76,094	68,894
France	44,162	33,569
Algeria	25,313	36,688
United States of America	218,028	206,818
Dutch West India Islands	4,337	3,708
British North America	3,192	250
British West India Islands	570	2,006
Other Countries	8,573	7,726
Totals	380,269	359,659

In the light of what has been said above, the Salt returns are especially interesting, and are given in the following table :—

TABLE VI.

QUANTITY AND VALUE OF SALT (ROCK AND WHITE) EXPORTED FROM THE UNITED KINGDOM.

Countries to which Exported.	1894. Quantity.	1895. Quantity.	1895. Value.
	Tons.	Tons.	£
Russia	20,460	18,967	9,339
Sweden and Norway	21,109	28,462	15,792
Denmark	35,419	34,274	16,101
Germany	21,167	22,041	11,362
Holland	17,736	17,300	5,279
Belgium	34,399	39,431	18,724
West Coast of Africa	37,222	38,322	46,869
British Possessions in South Africa	8,535	5,292	5,591
British East Indies	328,921	251,760	153,374
Australasia	57,569	42,790	47,503
British North America	69,790	66,138	49,230
United States of America	96,263	148,065	134,658
British West Indies	6,430	7,725	9,373
Foreign West Indies	11	30	108
Chili	3,045	6,355	5,756
Brazil	6,277	9,323	9,243
Other Countries	4,646	4,273	7,917
Totals	768,999	740,548	546,219

On account of the importance of the minerals imported from abroad, we add the following abstract of the summary of the mineral output in the British Colonies and possessions. Owing to the difficulties of compilation, the returns are always a year behind those for the United Kingdom :—

TABLE VII.

PRODUCTION OF MINERALS AND CERTAIN METALS IN THE BRITISH COLONIES AND POSSESSIONS.

Abstract of Summary.

Description of Mineral.	1894. Quantity.	1894. Value.
		£
Arsenic ..... Tons	6*	86*
Asbestos ..... ,,	7,290	94,503
Bismuth ore ..... ,,	65†	6,270†
Coal (including some Coke) ..... ,,	11,386,763*	4,345,392*
Cobalt Ore ..... ,,	2†	10†
Copper ..... ,,	11,406*	462,269*
Copper Ore and Regulus ..... ,,	68,816†	368,250†

TABLE VII.—(Continued).

Crocidolite	Lbs	21,649†	960†
Gold	Ozs.	4,683,947*	17,128,277*
Gypsum	Tons	205,613*	43,506*
Kauri Gum	,,	8,338*	404,567†
Manganese Ore	,,	927†	2,976†
Mica	Cwts.	3,701*	24,053*
Nickel	Tons	2,327*	424,062†
Ochre	,,	1,054*	2,291†
Oil Shale	,,	21,171†	31,781†
Petroleum	Galls.	11,139,597*	73,381*
	Brls	829,104*	171,642*
Phosphate of Lime	Tons	7,079†	10,134†
Platinum	...	—	205†
Plumbago	Tons	10,549†	96,178†
Pyrites	,,	36,185†	24,982†
Salt	,,	1,358,600*	577,281*
Silver	Ozs.	1,734,755*	207,146*
Umber	Tons	1,339†	679†
Wolfram	,,	105*	710*

* Increase. † Decrease as compared with 1893.

Want of space prevents us from touching on many interesting points in the returns which are full of matters affecting the chemical and mineral trades. We shall be pleased, however, to the best of our ability, to give readers further information on direct application.

PETROLEUM IN ROUMANIA.

THE report presented to Lord Salisbury by the British Acting Consul-General in Roumania has a double interest. It explains fully the recent developments of the petroleum industry in the Principality—a matter of importance in itself; and it further brings into prominence the fact that under the Mining Law of 1895 the position of foreigners with regard to the working of petroleum mines has been greatly altered and improved. Before the passing of the new law the investment of foreign capital in Roumanian petroleum was practically out of the question, for, in the first place, Article 7 of the Roumanian Constitution stipulates that no foreigner can hold landed property; and, in the second, there was no statute to determine the ownership of the land below the surface. A mining law for Roumania has now been passed, which not only makes plain many doubtful points hitherto connected with mining, but it holds out to foreigners many inducements to invest capital in the mineral wealth of the country. Seeing that there is almost a certainty that petroleum exists in very large quantities in Roumania, and that the industry has been hitherto sadly neglected, chiefly for want of capital, the change of the law in favour of foreign investors is a matter of no little importance. There is every prospect that the demand in this country for petroleum will be steadily on the increase with the development of motor-cars—for which oil appears to be much the best motive agent to employ—and consequently new sources of supply will help to maintain the equilibrium of prices. Then, again, with a superabundance of money awaiting investment, the possibilities of profitable petroleum mining in Roumania will hardly escape the attention of English capitalists. About one-quarter of the land of the Principality belongs to the State, one-half is owned by a small body of landholders—say, 12,000 or 15,000—and the remaining fourth has since 1864 been distributed among the peasants. These cannot, of course, for want of means, to say nothing of want of intelligence and initiative, do anything towards exploring the riches of the land; the landlords for the most part are content to reside in the towns, and leave their property to the ordinary treatment by agricultural occupiers. Even the forests and minerals known to be abundant in the mountainous districts are neglected. Technical knowledge is hardly existent, and the fact, noticed above, that until two years ago there was no law to determine the ownership of the land below the surface shows how little thought had been bestowed on the natural resources of the country not visible to the ordinary observer. Still, something has been done in spite of drawbacks, and the annual output of petroleum is now placed at about 80,000 tons. Of this about a third is obtained from the wells of fewer than half a dozen miners, and the remaining two-thirds are got from the lands of about 120 small speculators. As may be supposed, the only thought has been of the home market, for barely 15 per cent. of the yield is exported across the border. As the population of Roumania is about 6,000,000, it becomes evident that the home consumption at present must be in its infancy; but as the supply is developed and improved the demand will greatly increase: for the Roumanian peasants have, as it were, to be educated up to the use of anything but the crudest forms of domestic lighting. The report now under notice goes very fully into the probable yield of petroleum, according to the best scientific authorities, and on this is built up elaborate calculation of the capital required for working the mines, the estimated profit which such capital would produce. Here it be enough to say that the statistics are put forward on the best avail authority, both private and official, and will well repay the atten of all who are interested in the subject either from the commercia financial point of view.—*Birmingham Post.*

THE CARBONIC ACID GAS COMPANY.

THE importance which carbonic acid gas has now assumed in aeration of mineral waters and of bread, for the carbonatin beers, for refrigerating on board ship and on land, and many o purposes, has become so well recognised that we are not surprise see men of great responsibility and experience like Major C. G. E managing director of Barrett's Brewery and Bottling Company, L Mr. R. J. White, managing director, R. White and Sons, Mi Water Company, Ltd., identifying themselves so closely with London Carbonic Acid Company as to become prominent membe its board of directors. According to the *Investors' Guardian* scie theory has been so intimately wedded to practical working that vendor, Mr. H. Steinem, has now perfected a process by which CO_2 can be manufactured at a fraction of 1d. per lb. avoirdu An eligible plot of land, situate at Old Ford, with a cons able frontage on the River Lea, and possessing the advan of a plentiful supply of water and cheap water carriage, wi the site of the factory, with complete plant, which it is intended once erect. Mr. Kenneth S. Murray, engineer, and manager of B Oxygen Co., Ltd., certifies that he has carefully examined Steinem's estimate for a production of 6¼ tons of liquefied CO_2 pe hours, and from his personal knowledge of the process and expen in the compressed gas trade he considers his figures accurate reliable. The directors therefore estimate that they can produc sell 1,500 tons of liquefied CO_2 at a cost of £18. per ton, and that after defraying cost of production and distribution, will leave a pro £19,000. for the payment of dividend on the capital of £60,0 directors' fees, etc. It is anticipated, also, that another sour revenue will accrue to the company by the creation of subsi undertakings to work its process by royalty or otherwise. A important feature of the enterprise is that substantial contracts h already been made for large quantities of the company's produc such responsible firms as Barrett's Brewery and R. White and S It seems to follow from this fact that there are many thousand consumers to whom the liquefied carbonic acid gas produced by company must prove of the most essential service. So inadequ indeed, has the supply hitherto been, that the largest customers h been obliged to forego the use of the liquefied carbonic acid gas du this season. With contracts already entered into for the sale o greater part of the first year's output, the company should easily a complete commercial success.

Trade Notes.

PERSONAL.—We are requested to note that the connection w has for the past ten and a half years subsisted between Mr. R. Tatlock, F.R.S.E., F.I.C, F.C.S., public analyst and gas exam for the City of Glasgow, etc, and Mr. H. Ballantyne, F.I.C., has terminated, by mutual consent, and the latter has opened a labora at 75, Chancery-lane (the Holborn end), and will continue to pra as a consulting and analytical chemist.

NATIONAL CHAMBER OF TRADES.—A preliminary meeting connection with the above has been arranged to be held in Manch on Thursday, the 31st inst. Representatives are to assemble at Royal Hotel at 12 o'clock noon, and the names of any gentle representing traders' associations who are intending to be present, who have not already communicated with the conveners, are invite do so forthwith.

AN EXAMPLE OF AGRICULTURAL DEPRESSION.—Fambridge e 763 acres, near Rochford, is mostly arable. In 1872 it was valued the purpose of raising a loan, at £30,000., and an insurance com advanced £20,000. on mortgage. Insurance companies look twice again before parting with their money; we may be sure that valuation was reasonable. And the directors thought themselves enough in lending two-thirds of the sum. But it became necessar put up the estate for sale last week, and it realised £6,275., a los 80 per cent. in 24 years. At the last half-yearly meeting of Royal Agricultural Society, Mr. K. Fowler suggested cultivatio hemp and flax "on our derelict farms." The country pays £18,000. per annum for these products to the foreigner, whilst the English gr is the finest in the world. He was able to announce that a com has been formed for stimulating this culture, and the Council o Royal Agricultural Society is going to look into Mr. Fow suggestion.

Nitrate Statistics.—The Permanent Nitrate Committee, in its circular for December, gives the following particulars:—Total exports of nitrate of soda to Europe, November, 2,173,000 quintals; loading for Europe, December 1, 1,085,000 quintals; imports, Europe, November, 77,010 tons; deliveries, Europe, November, 30,640 tons; visible supply, Europe, December 1, stocks and afloat, 616,810 tons.

Commission on the West Indian Sugar Industry.—The Queen has been pleased to appoint General Sir Henry Wylie Norman (chairman), Sir Edward Grey, Bart., M.P., and Sir David Barbour to be the commissioners to inquire into the conditions and prospects of the West Indian sugar-growing islands, and Mr. Sydney Olivier to be their secretary. Mr. Daniel Morris, assistant director of the Royal Gardens, Kew, will accompany the commission as expert adviser on botanical and agricultural questions.

A Judge on Law Costs.—An application was recently made to Judge Embden, at Lambeth County Court, respecting the costs in an interpleader action, and it transpired that the original claim which the furniture in question was seized to satisfy was £11., whereas the costs of the subsequent interpleader proceedings, which were commenced in the High Court, were £25. Judge Embden said this was only a sample of cases which often came before him as remitted interpleaders, and he was bound to say that in his opinion the present state of the law seemed to be entirely favourable to litigants running up costs quite out of proportion to the amount in dispute. He could not help saying that the costs in these cases were a disgrace to legal procedure.

Market Reports.

TAR AND AMMONIA PRODUCTS.

Benzols are quiet at 2s. 8d. to 2s. 10d. for 90's, and 2s. 5d. for 50/90's. There is really next to nothing doing, however, and these prices must be taken as nominal. Carbolic acids are steady at 2s. 1d. for 60% crude and 7½d. for 40% crystals. Solvent naphtha remains firm at 1s. 7d., but crude is easier, nearest value heing 1s. 1d. Pitch is uncertain, and quoted 25s. to 28s. f.o b East Coast, but the inquiry has improved. Anthracene and creosote are steady.

Sulphate of ammonia is steady despite the holidays, and the inquiry is decidedly better, due, no doubt, to the welcome relief to stocks by the spurt at Leith and Glasgow. This having spent itself the market closes steady. Prices are:—London outside makes, £7. 13s. 9d.; Liverpool, £7. 10s.; Hull, £7. 8s. 9d. to £7. 10s.; and Leith, £7. 10s, all prompt. For January £8. is asked.

MISCELLANEOUS CHEMICAL MARKET.

Demand continues to be fairly steady for all the main products of the alkali trade, and there is no change in values to record during the past week. Quotations for caustic soda remain as follows—f.o.b. Liverpool, 77%, £9.; 74%, £8.; 70%, £7. 2s. 6d.; 60%, £6. 2s. 6d. per ton, 10-ton lots and upwards. Bleaching powder is in good request, both for early and forward shipment, and price is steady at £6. 15s., f.o.b.; £6. 10s. softwoods, f.o.r. Chlorates are quoted firm for near deliveries. Potash at 4½d., and soda at 5⅛d. per lb., but the prices are lower for 1897 delivery. Alkali, 58 %, remains steady at £3. 7s. 6d. bags, f.o r. Soda crystals are unchanged. Bicarbonate, £6. 10s. f.o b. For recovered sulphur there is active demand, and price firm at £4. 12s. 6d. to £4. 15s. f.o.r. For vitriol and muriatic acids there is a good inquiry, and full prices are maintained. Sulphate of copper is dearer, and for spring shipment £17. 15s. is now quoted. Potash, caustic and carbonate, are in continued good demand at full rates. Acetate of lime: Brown steady at £4. 5s. c.i.f., and £4. 10s. to £4. 12s. 6d. Manchester district, with rather a firmer tendency. Other acetates quiet anp unchanged in values. In white powdered arsenic there is still considerable scarcity, and the limited supplies are freely taken up at £24. f.o.r. Garston, Liverpool, London, &c. Glycerine is declining in value. Aniline oil and salt are also lower for early and forward delivery. Yellow prussiate of potash quoted at 5¼d. to 5⅜d. per lb. Bichromate unchanged. Sulphocyanides quiet, but with tendency to advance in price. In muriate of ammonia there is keen competition for business, and price is weak. In chemicals generally trade is reported quiet from all quarters.

REPORT ON MANURE MATERIAL.

The market continues quiet, with very little business passing. Quotations for mineral phosphate remain as last reported, United Kingdom buyers being altogether indifferent, though the Continent still manifests some interest. There is nothing reported in River Plate bones, cargoes offering either being too large or too late to suit buyers. For any handy cargo afloat same would fetch £3. 18s. 9d. Bombay bone meal is more freely offered, and to arrive £3. 17s. 6d. would be accepted. Nitrate of soda remains quiet at 7s. 10½ per cwt. for ordinary, and 8s. for fine quality, on spot. The value of due cargoes is about 7s. 9d. per cwt.

THE METAL MARKETS.

LONDON, Wednesday.—Pig iron: Scotch warrants closed at 48s. 5d., Middlesbrough 40s. 7d. cash, and hematite 50s. 6½d. Copper, steady: Chili bars, G. O. B.'s and G. M. B's., closed at £48. 8s. 9d. to £48. 13s. 9d cash, and £49. 2s. 6d. to £49. 7s. 6d. three months. Tin, easier: Straits closed at £57. 17s. 6d. to £58. 7s. 6d. cash, and £58. 16s. 3d. to £60. three months; Australian, £59. 19s. 6d.; English ingots, £62. 7s. 6d. Lead steady: Spanish, £11. 11s. 3d.; English, £11. 15s. Silesian spelter, ordinary, £17. 15s. to £17. 17s. 6d. Nickel, 1s. 2½d. Antimony, £30. 10s. to £31. Quicksilver: First hands, £6. 12s. 6d.; second hands, £6. 10s. *Copper shares*, steady: Cape, $2\frac{5}{8}$ to $2\frac{7}{8}$; Copiapo, 1¾ to 1⅞; Libiola, 1¾ to 1⅞; Mason and Barry, 2¼ to 2½; Rio Tinto, $24\frac{1}{8}$ to $25\frac{1}{16}$; Tharsis, 5¾ to 6.

GLASGOW, Tuesday.—Market steady, and a moderate business. Scotch done at 48s. 4d., and 48s. 4½d., cash; also at 48s. 7d., and 48s. 7½d. one month; closing with buyers at 48s. 4d. cash, sellers ask 48s. 4½d. Cleveland closes with buyers at 40s. 6d. cash, sellers ask 40s. 7d. Cumberland hematite done at 50s. 6d. and 50s. 7d. cash; closing with buyers at 50s. 7d. cash, sellers ask 50s. 8d. Middlesbrough hematite done at 49s. 7½d., 49s. 6d., and 49s. 7d. one month; closing with buyers at 49s. 3½d. cash, sellers ask 49s. 4½d.

LIVERPOOL OIL AND COLOUR MARKET.

Wednesday.

OILS.—Palm oil is steady, and considerable sales of Congo and Lagos have been made at £17. 10s. and £20. 15s. respectively. Olive keeps firm in price, but only a small business is doing. Linseed is quoted 16s. 6d to 17s. 6d. for Liverpool makes, in export casks, according to quality, and is fairly steady thereat. Cottonseed is being firmly held for 15s. 9d. to 16s. 3d. per cwt., while American is still offering at 17s 6d. per cwt. Castor oil is quieter, and only a small amount of business is passing on spot; quotations are 3¼d. to 3½d. for good seconds Calcutta, while first pressure French now offers at 2⅞d. per lb. Tallow is quoted firm, and though there is more disposition to buy, holders will do nothing to meet buyers in the matter of price. Resin keeps firm in price, and, considering all things, there is a satisfactory demand, but the market has an air of holiday lassitude. Spirits of turpentine are easier, and moving fairly well at 21s. per cwt. on spot. Petroleum fairly steady, quotations still being 6⅜d. to 7¼d. for American, and 5¾d. per gallon for Russian refined.

COLOURS.—Prices are steady, and practically without change. Ochres: Oxfordshire, common, £10., medium, £12., best, £15, Derbyshire, common, 40s.; medium, 50s., best, 60s.; Welsh, best, 90s., seconds, 50s., and common, 18s.; Irish, Devonshire, 40s. to 45s.; French, J.C., 65s. Umber: 40s. to 45s. White lead, £16. Red lead unchanged. Venetian red, £6. to £10. Cobalt: Prepared oxide, 9s. 9d.; black, 9s.; blue, 6s. Oxide of iron: Common, £7.; medium, £10.; finest, £20. Zinc oxide, £22. 10s. to £25.

TYNE CHEMICAL REPORT.

Tuesday.

In chemicals there is no alteration to report in prices, and the demand is very slow generally. Soda crystals, £2. 2s. 6d. per ton gross weight locally. Caustic soda, 76/77%, £9. to £9. 5s. per ton; and 70%, £7. 10s. per ton. Sulphur scarce at £5. per ton. Other prices as under:—

Bleaching powder, softs, £7. per ton, nett; hards, £7. 5s. per ton, nett; caustic soda, 76/77%, £9. 5s. per ton, nett; do., 70%, £7. 10s. per ton, nett; recovered sulphur, 2 cwt. bags, £5. per ton. nett; soda ash, 48%, £4. 2s. 6d. per ton, nett; do., 50%, £4. 5s. per ton, nett; do., 52%, £4. 7s. 6d. per ton, nett; alkali, 36%, £3. 7s 6d. per ton, nett; white alkali, 48%, £4. 17s. 6d. per ton, nett; do., 50%, £5. 2s. 6d. per ton, nett; do., 52%, £5. 7s. 6d. per ton, nett; hyposulphite of soda, 5-7 cwt. casks, £6. 5s. per ton, nett; do., 1 cwt. kegs, £7. per ton, nett; silicate of soda, 75° Tw., £2. 12s. 6d. per ton, nett; do., 100° Tw., £3. per ton, nett; do., 140° Tw. £3. 7s. 6d. per ton, nett; soda crystals, casks, £2. 2s. 6d. per ton, gross weight; do., 2 cwt. bags, £2. 2s. 6d. per ton, nett weight; chlorate of potash, 5d. per lb., less 6%; pearl hardening, £3. per ton, nett; pure white sulphate of alumina, £3. 17s. 6d. per ton, nett; blanc fixe, £7. 5s. per ton, nett: chloride of barium, refined crystals, £6. 15s. per ton, nett; do., 90/95% crude calcined, £6. per ton nett; sulphide of barium, crystals, £4. 15s. per ton, nett;

carbonate of alumina, £30. per ton, nett; aluminate of soda, £30. per ton, nett.

SALT.—South Durham salt steady at 9s. per ton, f.o.b. Tees.

COALS continue in better demand, and prices have improved for best steam and gas coals Coke is again firmer, both for export and locally. Best Northumbrian steam, 8s. to 8s. 6d. per ton; second qualities, 7s. to 7s. 6d. per ton; small steam, 3s. 3d. to 3s. 6d. per ton. Gas coals, 7s. to 8s. per ton. Bunker coals, 6s. 6d. to 7s. per ton. Coke firm, 14s 6d. to 16s. per ton.

HULL PAINT, OIL, AND COLOUR REPORT.

TUESDAY.

OILS.—Refiners, boilers, and manufacturers are very busy indeed, completing their contracts and in meeting more especially home requirements, and the very low prices ruling for cotton oil appears to be stimulating a heavy demand in these articles, especially from Marseilles, which is a very heavy buyer in this market. The imports so far as made up for the year as against the same time a year ago are:—Linseed, 912,272 quarters, against 712,934 quarters; rapeseed, 95,885 quarters, against 163,087 quarters; cottonseed, 173,899 tons, against 188,684 tons; olive oil, 17,066 casks, against 12,415 casks; rape oil, 4,648 casks, against 7,632 casks; oilcakes, 11,989 tons, against 17,164 tons; tallow, 69,589 cwts, against 15,132 cwts.; bones, 5,101 tons, against 3,798 tons; turpentine, 15,510 barrels, against 20,392 barrels. Linseed oil has been easier again, and closes quiet at 14s. 4½d. to 14s. 3d., naked spot; January-April, 15s. to 15s. 1½d.; and May-August, offering at 15s. 9d; boiled and refined, £1. to £1. 10s. per ton extra. Export for the week has been 1,080 cwts. Refined cotton oil rather firmer; spot worth 13s. per cwt., naked; and January-April, 13s. 7½d.; May-August, quoted at 14s. 3d. per cwt. naked; casks £1. and barrels £1. 10s. per ton extra. Export for the week has been 10,440 cwts. Olive oil firm. Castor oil unchanged. Turpentine, 21s. 6d. per cwt. Cod oils from £16. to £18. per ton. Stettin colza is quoted 28s. 6d. per cwt. in barrels. Olive oil soap, 60%, £16. 10s per ton; 65%, fatty acids, £17. 10s. per ton c.i.f. Hull. Brown Yorkshire grease scarce, £8. 10s. to £9. per ton. Bone grease, £16. Skin grease, £15 per ton.

CAKES.—The market remains quiet, and in face of the end of year is likely to remain so. Linseed cakes are quoted £5. 10s. to £6 5s. according to quality. Cottonseed cakes, £3 17s. 6d. is quoted spot. Black Sea rape cakes, £2. 17s 6d. to £3. 2s. 6d per ton.

PAINTS.—Makers are active. Some firms, those principally engaged in the export trade, are working overtime, but there are no changes in prices.

WEST OF SCOTLAND CHEMICALS.

GLASGOW, TUESDAY.

Is seems that early last week as low as £7. 3s 9d. was taken for sulphate of ammonia, prompt, f.o.b. Leith, but that there was an immediate upward movement thereafter, because of a rather heavy call for urgent Glasgow shipment, and high figures spoken of in one special case for this. Directly this momentary call was satisfied, the market fell back into its former quietness, and £7. 7s. 6d. to £7. 10s. is now about the quotation for Leith prompt, with very little on the move. Makers are not troubling to quote forward terms, knowing it to be of no use, and buyers are careless on that head, as if confident of continued inertness in prices. Business on all hands and in all sorts of chemicals is running down for the holiday stoppage of production, and the condition of things will be abnormal for a fortnight to come at least. There is no change in any of the quotations, except in chlorate of potash, which is dearer through scarcity. The others are all as before, and not much doing. In mineral oils and paraffins, the situation remains unchanged as regards values. Deliveries of burning oils ex contracts have been very large, and continue so.

Chief prices current are:—Soda crystals, £2. 2s. 6d., nett, Tyne; soda ash, 48/52°, £4. 2s. 6d. to £4. 7s. 6d. nett, Tyne; white alkali, 48/52°, £4. 17s. 6d. to £5. 7s. 6d. nett, Tyne; alum in lump, £5. to £5. 5s. nett, Glasgow; caustic soda, white, 74° £8., 70/72° £7. 2s 6d, 60/62° £6. 2s. 6d., and cream 60/62° £6., all nett, Liverpool; bleaching powder, £6. 12s. 6d. nett, Tyne; saltcake, 21s.; borax, English, refined, £20., and boracic acid, £30. nett, Glasgow; bicarbonate of soda, 5-cwt. casks, £6. 7s. 6d., and 1-cwt. casks £6. 15s. nett, Liverpool; bichromate of potash, 4½d. nett, for Scotch and English deliveries (for export, 4¼d. nett, f.o.b. Glasgow); bichromate of soda, 3¾d. nett, for Scotch and English deliveries (for export, 3½d. nett, f.o.b. Glasgow); chlorate of potash, 4¼d. less 5%, any port; nitrate of soda, 7s. 10½d. to 8s. 3d.; sulphate of ammonia, £7. 7s. 6d. to £7. 10s. prompt, f.o.b. Leith; salammoniac, first and second white, £37. and £35. nett, any port; sulphate of copper, £17. 5s. to £17. 10s. less 5%, Liverpool; paraffin scale, hard, 1 7/16d. to 1¾d., and soft, 1½d. to 1 7/16d. per lb.; paraffin wax, 120° semi-refined, 1 15/16d. to 2 3/16d. per lb.; paraffin spirit (naphtha), 7½d. per gallon; paraffin oil (burning) No. 1, 6¼d., and crystal, 6½d., at Glasgow and other big centres, for Scotch trade (English sales ½d. to ¾d. lower); ditto (lubricating) 865° £5. to £5. 5s., 885° £5. 15s. to £6. 5s., and 890/895° £6. 10s. to £7. Week's imports of sugar at Greenock were *nil*.

New Companies.

Acetylene Gas Lighting Development Syndicate, Ltd.—CAPITAL £1,200, in shares of £10. each. This company has been formed to acquire patents relating to the manufacture of chemicals for the production of acetylene gas and to work the same.

Anglo-Bosphorus Oil Company, Ltd—CAPITAL £1,000., in shares of £1. each. This company has been formed to carry on the business of oil importers, refiners, grease merchants, etc., at Bristol.

E. and F. N. Spon, Ltd.—CAPITAL £30,000., in £1. shares. This company has been formed to acquire and carry on the business of publishers, etc, at 123, Strand, W.C. The subscribers to the memorandum of association are:—F. N. Spon, 45, Wickham-road, Brockley, publisher; W. Spon, 48, Dartmouth-road, Forest Hill, publisher; F. E. Spon, 45, Wickham-road, Brockley, publisher; C. A. Spon, 45, Wickham-road, Brockley, clerk; W. S. Baxter, 58, Mayflower-road, Clapham, clerk; G. Larner, 48, Devonshire-road, Forest Hill, valuer; G. E. Hands, New Square, Lincoln's Inn, C.A.

IMPORTS OF CHEMICAL PRODUCTS AT THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.

Week ending December 12th.

Acetate of Lime—

U. States	1,678 bgs.	H. Wallace & Co.

Acetic Acid—

Holland,	202 pks.	A. & M. Zimmermann
France,	1	J. Harrison
Holland,	30	R. W. Greeff & Co.
,,	50	[illegible] & Johnston

Alkali—

France,	47 c.	Spies Brs. & Co.
,,	40	J. Barber & Co.

Alum—

Holland,	73 cks.	Ohlenschlager Brs.

Anhydrous Ammonia—

Holland,	12 cs.	H. Lorenz

Antimony—

Sydney,	8 t.	H. Bath & Son

Antimony Ore—

Sydney,	14 t.	H. Bath & Son
,,	10	Union L. Co., Ltd.
Portugal,	1	Coverley & Westray

Asbestos—

Canada,	£423	W. Byford
Italy,	1,011	,,
,,	20	London Asbestos Co.
Germany,	40	Craven & Co.
France,	108	Girard Frs. & Co.

Barytes—

Holland,	20 cks.	O'Hara & Hoar
,,	20	J. Kitchin, Ld.
Germany,	54	Tomlin & Nephew

Bleaching Powder—

Germany,	100 cs.	H. Lambert
Holland,	67 cks.	Ldn. & Rhine S. Co.
Germany,	67	R. W. Greeff & Co.

Bromide of Iron—

Germany,	10 cks.	A. & M. Zimmermann

Bromine—

Germany,	20 cs.	A. & M. Zimmermann

Caoutchouc—

Madagascar,	4 c.	Hale & Son
Penang,	23	Prop. Bull Wf.
Zanzibar,	25	Clarke & Smith
Holland,	94	L. & I. D. Jt. Co.
,,	25	A. G. Lihme & Co.
Aden,	4	Hale & Son
Zanzibar,	45	Major & Field
Singapore,	100	Huttenbach & Co
Belgium,	1	Société John Cockerill

Carbolic Acid—

Germany,	135 pks.	J. G. Back

Castor Oil—

France,	28 brls.	Mordaunt Brs.
Italy,	10 cs.	J. Knill & Co.
E. Indies,	68 cks.	Cayzer, Irvine & Co.
,,	31	Ross & Deering
France,	28	J. Greig
,,	29 brls.	C. Windschuegl & Co.
,,	28	Perkins & Homer

Caustic Potash—

Germany,	58 drs.	J. M. Steel & Co.

Chemicals (*otherwise undescribed*)

Germany,	£20	J. Barber & Co.
,,	30	F. Allen & Sons
Holland,	14 cks.	J. Barber & Co.
Belgium,	9	Société John Cockerill
Holland,	23	Hernu, Peron & Co.
U. States,	528	F. J. Parker
Germany,	7	Craven & Co.
,,	340	T. H. Lee
,,	80	A. & M. Zimmermann
,,	4	L. & I. D. Jt. Co.
Holland,	12	F. Boehm
,,	50	Phillipps & Graves
France,	85	Mory & Co.
Germany,	23	H. Lambert

Copperas—

Germany,	31 cks.	City Const. Wf.
Holland,	11	A. & M. Zimmermann

Cream of Tartar—

France,	1 ck.	R. & F. Wf. Co.
,,	7	C. Atkins & Nisbet
Holland,	12	Kirkpatrick & Co.

Dextrine—

Germany,	200 bgs.	W. Balchin

Dyestuffs—

Argols

Italy,	132 bgs.	Thames S. T. & L. Co. Ld.
,,	368	B. Jacob & Son
Cape,	11	J. R. Thomson & Co.

Cochineal

Canaries,	10 bgs.	J. W. Bethell
,,	4	Sperling & Williams
,,	4	G. S. Bruce
,,	9	W. H. Cole & Co.
,,	8	Kuhner, Henriques & Co.

Gutch
Singapore, 100 cs. Borneo Co.
Ceylon, 80 Cayzer, Irvine & Co.
Extracts
Canada, 130 cks. Boutcher, Mortimore & Co.
N. Russia, 2 M. D. Co.
France, 25 B. & F. Wf. Co.
,, 200 cs. T. H. Lee
Austria, 100 brls. A. J. Humphery
,, 100 H. Grey, jun.
Gambier
Singapore, 224 bls. J. Greig
,, 452 P. & O. Co
Indigo
E. Indies, 4 chts. Parry & Co.
Holland, 13 L. & I. D. Jt. Co.
E. Indies, 2 Montgomery & Co.
,, 8 L. & I. D. Jt. Co.
,, 25 Binny & Co.
,, 26 H. W. Jeweshury & Co.
Tanners' Bark
Adelaide, 101 t. J. Greig
Natal, 50 A. & W. Nesbitt
N Zealand, 3 G. N. Sourality & Co.
Adelaide, 126 Baxter & Hoare
Valonia
A. Turkey, 50 t. Boutcher, Mortimore & Co.
,, 75 A. & W. Nesbitt
,, 52 Hicks, Nash & Co.

Farina—
Holland, 100 bgs. Ohlenschlager Brs.
France, 1 cs. Hernu, Peron & Co.
Holland, 25 bgs. T. H. Lee
,, 50 Dunlop Brs. & Co.
Germany, 100 Hernu, Peron & Co.

Glucose—
U. States, 750 pks. 750 c. L. Norman & Co. Ltd.
,, 150 900 W. Grose & Co.
Germany, 14 120 J. Knill & Co.
U. States, 50 311 R. Johnson & Co.
,, 100 600 T. J. Lipton
,, 350 330 L. & I. D. Jt. Co.
,, 2,200 8,896 R. G. Hall & Co.

Glue—
Austria, £246 M. D. Co.
,, 130 Steinhoff, Sons, & Co.
France, 193 J. Harrison
Holland, 25 Carey & Sons
Belgium, 260 J. Barber & Co.
Austria, 26 J. Kitchin, Ltd.
Germany, 20 T. H. Lee
France, 12 Mory & Co.
,, 13 Hernu, Peron, & Co.
Austria, 270 J. Barber & Co.
France, 400 Fischel & Co.

Infusorial Earth—
M'bourne, £103 L. & N.-W. Rly. Co.
Belgium, 50 bgs. W. Harrison & Co

Lamp Black—
U. States, 70 hds. J. Melvin

Litharge—
Germany, 19 cks. H. Wallace & Co.
,, 57 Spies Brs. & Co.
Holland, 17 D. Storer & Sons

Manganese—
Germany, 15 t. C. Hof & Co.

Manure—
Belgium, 70 t. Anglo-Contl. G. Wks.
,, 30 Chemical Works
Germany, 3 F. W. Berk & Co., Ld.
,, 30 Humphrey & Co.

Metallic Oxide—
Germany, 1 ck. Brit. Anti-Fouling Compo Co.

Methyl Alcohol—
Belgium, 5 dms. A. H. Wintersgill
U. States, 50 brls. Stein Brs.
France, 18 dms. A. H. Wintersgill
Germany, 9 Stein Brs.
Belgium, 17 Lister & Biggs

Mica
E Indies, £360 W. M. Smith & Sons
Holland, 9 L. & I. D. Jt. Co.
Germany, 8 Drolenvaux & Co.
Ceylon, 25 F. Braby & Co.

Molasses—
U. States, 800 cks. 4,822 c. Newcomb Ltge. Co.

Naphthol
Holland, 8 cks. Phillipps & Graves

Ochre—
France, 25 cks. J. Swire & Sons
Holland, 7 12 pks. Phillipps & Graves
France, 6 T. Cartwright

Phosphate Rock—
U. States, 2,700 t. Anglo-Contl. G. Wks.
France, 25 West & Penrose
,, 200 A. Hunter & Co.

Pitch—
N. Russia, 200 brls. Fellows, Morton, & Co.
,, 200 J. Greig

Plumbago—
Ceylon 184 cks. J. Thredder, Son, & Co
Germany, 44 cs. T. H. Lee
Ceylon, 20 L. & I. D. Jt. Co.
,, 40 brls. R. G. Hall & Co.

Potash—
France, 106 c. Petri Brs.
Canada, 103 S. Ward & Co.
,, 80 Charles & Fox

Potassium Bicarbonate—
Holland, 50 c. A. & M. Zimmermann

Potassium Carbonate—
France, 200 c. Charles & Fox
Germany, 20 Petri Brs.
France, 95 ,,

Potassium Oxalate—
Holland, 20 cks. R. W. Greeff & Co.

Potassium Sulphate—
Belgium, 150 bgs. Petri Brs.

Pyrites—
Spain, 2,050 t. C. Tennant, Sons, & Co.

Rosin—
U. States, 4,223 brls. F. & S. Chiesman & Co.
Holland, 3 Phillipps & Graves

Rosin Oil—
France, 216 brls. C. Price & Co.

Soda—
Holland, 200 c. R. W. Greeff & Co.
,, 220 J. Owen
Belgium, 3,600 R. Waters

Sodium Acetate—
France, 28 cks. Prop. Hay's Wf.
,, 28 H. Lorenz

Sodium Bichromate—
Germany, 380 c. A. E. Neale

Sodium Prussiate—
Belgium, 14 brls. D. C. Thomas & Sons

Sodium Sulphate—
Holland, 30 cks. H. Wallace & Co.

Starch—
France, 200 cs. Prprs. Dowgate Dk.
Belgium, 80 Taylor Brs.
,, 80 80 bxs. Leach & Co.
,, 350 T. H. Lee
Holland, 249 ,,
France, 40 B. & F. Wf. Co.
Holland, 341 Little & Johnston
,, 30 Phillipps & Graves
Germany, 2,003 Horne & Co.

Sulphate—
Belgium, 67 cks. 67 brls. O'Hara & Hoar

Talc—
France, £12 T. H. Lee

Tartaric Acid—
Holland, 31 pks. B. & F. Wf. Co.
,, 3 F. C. Devon & Co.
,, 20 6 cks. Kirkpatrick & Co.

Tincal—
E. Indies, 53 bgs. J. Puddy & Co.

Ultramarine—
Belgium, 4 brls. J. L. Lyon & Co.
,, 2 Leach & Co.
Holland, 2 cs. Hernu, Peron, & Co.
Belgium, 4 pks. W. Harrison & Co.
,, 15 brls. J. Harrison

Varnish—
U. States, 21 pks. Pinchin & Johnson
Holland, 8 cks. Hernu, Peron, & Co.
U. States, 18 pks. Lunham & Moore

White Lead—
Belgium, 19 cks. Burrell & Co.
Holland, 58 T. & W. Farmiloe
,, 58 D. Storer & Sons
,, 20 W. A. Rose & Co
,, 29 F. G. Clifford
,, 15 Randall Bros.
Belgium, 20 Perkins & Homer
Holland, 38 Ross & Deering

Wood Pulp—
Sweden, 738 pks. E. Anderson
Belgium, 1,016 E. J. & W. Goldsmith
Germany, 400 W. Friedlaender
Sweden, 400 Hummel & Co.
,, 4,435 Henderson, Craig, & Co.
Norway, 250 Tough & Henderson
Germany, 500 Henderson, Craig, & Co.
Sweden, 370 W. G. Taylor & Co.
Norway, 400 Christophersen, Andrews, & Co.
Holland 75 Henderson, Craig, & Co.
Sweden, 300 Moreton Cox Brs.
,, 800 W. E. Bott & Co.
,, 400 E. J. & W. Goldsmith
Norway, 250 ,,
,, 120 Johnsen & Jörgensen
Germany, 245 O. Herrlich
Norway, 1,200 Skramnes & Co.

Zinc Oxide—
Holland, 50 cks. Prprs. Dowgate Dk.
,, 80 J. Matten
Germany, 134 brls. M. Ashby, Ltd.
Holland, 51 40 cks. ,,

Zinc White—
Holland, 500 cks. Soundy & Sons

LIVERPOOL.

Week ending December 10th.

Albumen—
Hamburg, 2 cs.

Barytes—
Rotterdam, 22 cks.

Bauxite—
Norfolk, 531 bgs.

Borax—
Galveston, 3,283 sks.
Mollendo, 1,245 A. & J. Henry & Co.

Caoutchouc—
Havre, 37 cks. Cunard S. S. Co., Ld.

Castor Oil—
Calcutta, 945 cs. Ralli Brs.

Chemicals *(otherwise undescribed)*
Philadelphia, 22 brls.
Hamburg, 10 cks.

Colours—
Ghent, 4 brls. J. T. Fletcher & Co.

Dyestuffs—
Fustic
Carthagena, 776 ps.
,, 865 pcs. G. H. Muller & Co.
Tampico, 1,042 D. Midgley & Son
Saffron
Valencia, 1 cs. Dart & Co.

Glucose—
New York, 300 brls. T. M. Duche & Sons

Glue—
Rouen, 3 cks. R. J. Francis & Co.
,, 14 4 bls. 20 cs. Co-op. W'sale Society, Ld.
Rotterdam, 5 cs.

Lamp Black—
New York, 186 b ls. W. Kelso & Co.

Manganese Ore—
Poti, 2,250 t.

Ochre—
Rouen, 240 cks. R. J. Francis & Co.

Paint—
Boston, 70 cs. W. Nichol & Co.
,, 15

Paraffin Scale—
New York, 525 brls. Thompson & Bedford
Philadelphia, 113

Phosphate—
Montreal, qty.

Potash—
Montreal, 8 brls.

Salt—
Boston, 65 tcs.

Saltpetre—
Calcutta, 638 bgs. Ralli Brs.
Hamburg, 2 cks. 15 kgs. 2 brls.

Soap—
N. Orleans, 192 brls.
Philadelphia, 6 cs.
New York, 1 & qty. Colgate & Co.

Soda—
Barcelona, 1 cs.

Soda Crystals—
Rouen, 23 cks. R. J. Francis & Co.

Starch—
New York, 200 bgs. T. M. Duche & Sons
,, 1,800
Newport News, 400 sks.

Tallow—
Boston, 50 brls. Colby & Co.

Tartar—
Bordeaux, 13 cks.
Hamburg, 3

Treacle—
Rotterdam, 1 ck.
N. Orleans, 1,800 brls.

Ultramarine—
Hamburg, 9 cks. 1 cs.

Varnish—
Boston, 6 bxs. W. H. Staynes & Smith

Varnish and Colours—
Rotterdam, 1 cs. 2 cks. 5 tubs

White Lead—
Ghent, 28 brls. J. T. Fletcher
Constantinople, 2 kgs.
Rotterdam, 36 cks.

Wood Pulp—
Fredrikshald, 2,896 bls.
Boston. 637 Spicer Brs., Ld.

Zinc White—
Rotterdam, 26 cks.

MANCHESTER.

Week ending December 12th.

Aniline Colours—
Rotterdam, 25 cks. 6 cs.

Antimony Oxalate—
Rotterdam, 10 cks.

Asbestos—
Hamburg, 2 bls.

Barytes—
Antwerp 50 bgs.
Rotterdam, 24 cks.

Bone Ash—
Rio Grande Do Sul, 369 t.

Chemicals *(otherwise undescribed)*
Rotterdam. 18 cks.

Chrome Alum—
Rotterdam, 27 cks.

Colours—
Boulogne, 3 cks.
Ghent, 3 brls.
Antwerp. 10 cs.
Rotterdam, 21 bxs. 28 86

Dyestuffs—
Alizarine
Rotterdam, 68 cks. 32 brls.
1 bx.
Annatto
Bordeaux, 6 cks. J. & P. Hutchison
Logwood
Christiania, 14 cs.

Farina—
Stettin, 5,010 bgs. Brown, Geveke, & Co.
,, 822
Hamburg, 200

Gelatine—
Antwerp, 6 cs.

Glucose—
Stettin, 200 bgs. 60 cks.

Glue—
Stettin, 40 bgs.
Rotterdam, 80
Hamburg, 20
Fiume, 100 16 cks.

Litharge—
Rotterdam. 6 cks.

Mineral White—
Fiume, 540 bgs.
Bordeaux, 63 J. & P. Hutchison
,, 200 G. G. Blackwell, Sons, & Co.

Pitch—
Hamburg, 57 cks. 60 brls.

Pyrites—
Huelva, 770 t. Stott, Coker, & Co.

Soap—
Bordeaux, 4 cs. J. & P. Hutchison

Sodium Nitrate—
Rotterdam, 4 cks.

Starch—
Rotterdam, 5 cks. 155 cs.
Fiume, 300 bgs.
Antwerp, 130
Sulphuric Acid—
Rotterdam, 40 cks.
Tar Salts—
Hamburg, 5 cks.
Tartaric Acid—
Antwerp, 8 cks.
Rotterdam, 6
Ultramarine—
Rotterdam, 4 cks. 22 cs.
Waste Salt—
Hamburg, qty.
Wood Pulp—
Porsgrund, 2,800 bls.
Zinc Oxide—
Rotterdam, 100 brls.
Zinc White—
Rotterdam, 25 cks.

HULL.

Week ending December 12th.

Acids—
Boston, U.S.A., 26 brls. Wilson, Sons, & Co., Ld.
Albumen—
Riga, 20 cs.
Barytes—
Rotterdam, 44 cks. Hutchinson & Son
Antwerp, 68 H. F. Pudsey
Hamburg, 259 Blundell, Spence, & Co.
Antwerp, 122 pks.
Caoutchouc—
Dunkirk, 22 pks. Wilson, Sons. & Co., Ld.
Chemicals *(otherwise undescribed)*
New York, 1 brl.
Christiania, 44 cks. Wilson, Sons, & Co., Ld.
Hamburg, 1 cs. Veltmann & Co.
Antwerp, 3 cks. Wilson, Sons, & Co., Ld.
Bremen, 11 cs. Veltmann & Co.
China Clay—
Hamburg, 323 bgs. Wilson, Sons, & Co., Ld.
Colours—
Antwerp, 21 cks. Wilson, Sons. & Co., Ld
Rotterdam, 25 W. & C. L.
37 brls. 9 cs. 40 pks. Ringrose
Cottonseed Oil—
New York, 450 brls. Wilson, Sons, & Co., Ld.
Cryolite—
Copenhagen, 4 cks. Wilson, Sons, & Co., Ld.
Dextrine—
Stettin, 100 bgs. Wilson, Sons, & Co., Ld.
Dyestuffs—
Alizarine
Rotterdam, 16 cks. W. & C. L.
15 brls. 21 pks. Ringrose
Argols
Bordeaux, 2 cks. Rawson & Robinson
Dyestuffs *(otherwise undescribed)*
Boston, U.S.A., 15 cks. Wilson, Sons, & Co., Ld.
Farina—
Stettin, 720 bgs. Wilson, Sons, & Co., Ld.
Glucose—
Stettin, 10 cks. Wilson, Sons, & Co., Ld.
New York, 2,250 bgs.
Rotterdam, 50 Hutchinson & Son
Glue—
Christiansund, 2 brls. Wilson, Sons, & Co., Ld.
Dunkirk, 25 cks. ,,
Kaolin—
Rotterdam, 123 bgs. W. & C. L. Ringrose
Paint—
Amsterdam, 25 cks. W. & C. L. Ringrose
Phosphate—
Ghent, 80 t.
Dunkirk, 1,000 bgs.
Phosphate Rock—
Pt. Royal, 2,435 t. Hammond, Emes, & Co.
Pitch—
Amsterdam, 16 cks. Hutchinson & Son
Potash—
Dunkirk, 10 cks. Wilson, Sons, & Co., Ld.
Antwerp, 20 dms. ,,
Potassium Oxalate—
Rotterdam, 5 cks. Hutchinson & Son
Pyrites—
Huelva, 1,795 t.
Saltpetre—
Rotterdam, 10 cks. Hutchinson & Son
Antwerp, 135 bgs. Wilson, Sons, & Co., Ld.
Soap—
New York, 100 bxs.
Soda—
Antwerp, 1 dm. Wilson, Sons, & Co., Ld.
Starch—
Ghent, 242 cs. Wilson, Sons, & Co., Ld.
Amsterdam, 80 W. & C. L. Ringrose
Bremen, 5,002 Veltmann & Co.
Stearine—
Aalesund, 2 cks.
Antwerp, 40 pks.
Tallow—
Boston, U.S.A., 5 trcs. Wilson, Sons, & Co., Ld.
Harlingen, 1 ck. Hutchinson & Son
Treacle—
New York, 325 brls. Wilson, Sons, & Co., Ld.
Boston, U.S.A., 50 ,,
Ultramarine—
Rotterdam, 1 ck. Hutchinson & Son
,, 10 W. & C. L. Ringrose
Varnish—
Amsterdam, 2 cks Hutchinson & Son
Antwerp, 2 pks. Wilson, Sons, & Co., Ld.
White Lead—
Rotterdam, 136 cks. W. & C. L. Ringrose
,, 148 Hutchinson & Son
Antwerp, 33 Bailey & Leetham
,, 10 Wilson, Sons, & Co., Ld.
Wood Pulp—
Christiania, 4,673 bls. Wilson, Sons, & Co., Ld.
Hamburg, 34 ,,
Gothenburg, 1,517 ,,
Stockholm, 117 ,,
Helsingfors, 386 J. Good & Sons
Zinc Ashes—
Antwerp, 14 cks. Bailey & Leetham
Zinc Oxide—
Rotterdam, 25 cks. W. & C. L. Ringrose
Antwerp, 50 Bailey & Leetham

GLASGOW.

Week ending December 17th.

Albumen—
Hamburg, 9 cs. 3 cks.
Alum—
Hamburg, 163 cks.
Ammonium Acetate—
Rotterdam, 3 brls. J. Rankine & Son
Aniline—
Rotterdam, 2 bxs. 6 cks. 3 cs. 11 brls. J. Rankine & Son
Arachide Oil—
Rotterdam, 1 ck. J. Rankine & Son
Barytes—
Rotterdam, 145 cks. J. Rankine & Son
Castor Oil—
Marseilles, 115 cks. Wm. Bunten & Co.
,, 261
Chemicals *(otherwise undescribed)*
Rotterdam, 2 cs. J. Rankine & Son
Chrome Alum—
Rotterdam, 9 cks 6 brls. J. Rankine & Son
Cod Oil—
St. John's, N'fld., 282 cks.
Colours—
Hamburg, 2 cks.
Rotterdam, 17 11 pks. 25 cs. J. Rankine & Son
Dyestuffs—
Alizarine
Rotterdam, 49 cks. 1 cs. 82 brls. 3 bxs. J. Rankine & Son
Cutch
Rangoon, 917 bxs. P. Henderson & Co.
Farina—
Antwerp, 3 bgs.
Glue—
Rotterdam, 30 bgs. J. Rankine & Son
Infusorial Earth—
Hamburg, 225 bgs.
Lead Acetate—
Hamburg, 14 cks.
Oxalic Acid—
Rotterdam, 6 cks. J. Rankine & Son
Paraffin Wax—
Baltimore, 330 brls.
Plumbago—
Genoa, 240 bgs.
Potash—
Rotterdam, 30 cks. J. Rankine & Son
Rosin—
New York, 110 brls.
Saltpetre—
Hamburg, 5 cks. 40 kgs.
Soap—
Philadelphia, 26 crts. 650 bxs.
Marseilles, 2
Starch—
Baltimore, 400 bgs.
Rotterdam, 90 cs. J. Rankine & Son
Stearine—
St. John's, N'fld., 16 cks. John Murray & Son
Talc—
Marseilles, 5 cs.
Tartaric Acid—
Antwerp, 8 cks.
Treacle—
Philadelphia, 1,125 brls. Waddell & Bryson
Varnish—
New York, 11 brls.
Waste Salt—
Hamburg, 521 bgs.
White Lead—
Rotterdam, 46 cks. J. Rankine & Son
Wood Pulp—
Christiania, 3,234 bls. 70 cs.
,, 320 Alsing & Co., Ld.
Zinc Oxide—
Hamburg, 50 cks.
New York, 25 J. Rankine & Son

TYNE.

Week ending December 12th.

Antimony—
Cartagena, 14 t.
Asbestos—
Antwerp, 2 pks. Tyne S. S. Co.
Barium Chlorate—
Rotterdam, 250 bgs. Tyne S. S. Co.
Barytes—
Antwerp, 1 bg. Tyne S. S. Co.
Camphor—
Hamburg, 1 brl. Tyne S. S. Co.
Colours—
Hamburg, 2 brls. Tyne S. S. Co.
Antwerp, 3 cks. ,,
Glucose—
New York, 50 brls. Furness, Withy, & Co.
Glue—
Antwerp, 1 ck. Tyne S. S. Co.
Lamp Black—
New York, 30 cs. Furness, Withy, & Co.
Limestone—
Antwerp, 5 crts. Tyne S. S. Co.
Pitch—
Hamburg, 19 brls. Tyne S. S.
Rotterdam, 6 cks. ,,
Soap—
Rotterdam, 6 cs. Tyne S. S.
Starch—
Rotterdam, 124 cs. Tyne S. S.
White Lead—
Antwerp, 11 cks. Tyne S. S.
Wood Pulp—
Gothenburg, 120 pks.
Christiania, 514 bls.

GOOLE.

Week ending December 9th.

Acetic Acid—
Antwerp, 14 cks.
Alizarine—
Rotterdam, 60 cks.
Alkali—
Calais, 18 cks.
Aniline—
Rotterdam, 80 cks. 21 cs.
Antimony—
Boulogne, 4 cks.
Colours—
Hamburg, 2 cs.
Dyestuffs *(otherwise undescribed)*
Rotterdam, 16 cs. 90 brls.
Boulogne, 58 cks. 3
Farina—
Hamburg, 450 bgs.
Harlingen, 200
Glucose—
Calais, 200 bgs.
Glue—
Rotterdam, 25 cs.
Logwood—
Belize, 1,358 t.
Madder—
Rotterdam, 2 cks. 1 p.
Potash—
Dunkirk, 10 cks.
Calais, 2 dms.
Saltpetre—
Hamburg, 10 cks.
Rotterdam, 200 bgs.
Starch—
Ghent, 80 cs.
Tallow—
Hamburg, 50 brls.
Dunkirk, 26 cks.
Tartaric Acid—
Rotterdam, 3 cks.
Waste Salt—
Hamburg, 1,280 cks. 225 t.

GRIMSBY.

Week ending December 12th.

Albumen—
Hamburg, 5 cks.
Caoutchouc—
Rotterdam, 2 cs.
Antwerp, 2
Chemicals *(otherwise undescribed)*
Hamburg, 1 ck. 8 pks.
Antwerp, 16 13
Colours—
Antwerp, 73 pks.
Hamburg, 17 cks. 1 cs. 22
Dyestuffs *(otherwise undescribed)*
Dieppe, 25 cks.
Farina—
Hamburg, 20 bgs.
Indigo—
Rotterdam, 4 pks.
Lamp Black—
Helsingborg, 27 cks.
Soap—
Hamburg, 1 cs.
Starch—
Antwerp, 73 cs.
Rotterdam, 60
Wood Pulp—
Kragero, 672 t.
Zinc Ashes—
Antwerp, 9 cks.

EXPORTS OF CHEMICAL PRODUCTS
OF
THE PRINCIPAL PORTS OF THE UNITED KINGDOM.

LONDON.
: ending December 16th.

Acid—
ne, 12 cs. £24
de, 6 14
—
urne, 6 cs. £12
— 5 c. £19

nium Carbonate—
dam, 10 cks. 5 cs. £68

nium Chloride—
Town, 6 kgs. £11
11 c. 22
v, 7 t. 1 145
ntinople, 2 25 cks. 151
ts, 1 7 44

nium Sulphate—
Town, 5 t. £40
arg, 30 225
n, 100 750
loes, 200 1,500
12 11 c. 105
20 150
100 750
ux, 30 7 220
rk, 30 15 220

rous Ammonia—
ne, 9 cyldrs. £135

c—
r, 12 t. £389

hite of Lime—
£10
ta, 1 t. 15 c. 33

ing Powder—
Town, 40 cs. £26
20 15

c Acid—
ne, 10 c. £13
—
ndon, 3 t. £65
ne, 15 c. 16

m—
urne, 4 t. 9 c. £35

n Phosphate—
ta, 1 cs. £10

ic Acid—
gshafen, 47 cks. £209
idria, 1 brl. 6
i, 8 58
rdam, 18 pps. 260
Bay, 2 cs. 20

a Bisulphide—
de, 20 cs. £28

c Potash—
r, 2 t. 10 c. £73
y, 10 20
urne, 2 10 70

c Soda—
igton, 8 c. £20
urne, 19 19

cals *(otherwise undes.)*—
tave, 2 cs. £16
deo, 6 13
rt, 15 cks. 200
rk, 16 200
15 kgs. 32
Bay, 8 68
ndon, 5 52
n, 11 148
ne, 1 t. 5 c. 31
56 1 206
ide, 73 pks 35
urg, 14 24
res, 504 340
urne, 6 29
ay, 25 12 149

Acid—
Bay, 1 c. £5
lizabeth, 1 8
tta, 2 15
ay, 5 30
urne, 1 t. 5 150
gton, 5 21
3 19
din, 1 6
Town, 2 13
g, 1 cs. 17
10 62
2 10 305
urg, 10 kgs. 44
rdam, 10 60

Coal Products—
Alizarine
Bombay, 50 cks. £124
Timaru, 15 86
Alizarine Dyes
Bombay, 609 cks. 1,920
Aniline
Ghent, 10 dms. £500
Genoa, 1 cs. 6
Aniline Dyes
Melbourne, 1 cs. £48
Anthracene
Rotterdam, 50 cks. 100 brls. £1,235
Dusseldorf, 54 340
Benzine
Melbourne, 22 crts. £32
Benzol
Terneuzen, 12 dms. £130
Amsterdam, 46 cks. 232
Rotterdam, 299 48 brls. 2,052
Creosote
New York, 1,500 cks. £720
Creosote Oil
San Francisco 400 cks £225
Mirbane Oil
Hamburg, 15 pkgs. £28
Naphtha
Auckland, 10 dms. £19
Brussels, 48 cks. 150
Melbourne, 25 11
Calais, 48 132
Natal, 20 4 cs. 21
Naphthaline
B. Ayres, 20 cks. £20
Rotterdam, 300 bgs. 165
Varna, 3 brls. 6
Philadelphia, 678 134
New York, 100 75
Stettin, 400 150
Pitch
Dunkirk, 220 t £180
N. Orleans, 200 brls. 102
Huelva, 1,650 2,725
Prussian Blue
Rotterdam, 21 cks. £80
Pyridine
Hamburg, 2 dms. £75
Tar
Trinidad, 12 brls. £10
Colombo, 5 runlets 11
Algoa Bay, 130 dms. 6
Nagasaki, 80 14
Singapore, 35 7
Toluol
Hamburg, 50 cks. £307

Coal Products *(otherwise undes.)*—
Algoa Bay, 10 cs. £75
New York, 20 cks. 158

Copper Sulphate—
Salonica, 1 t. 3 c. £20
Marseilles, 5 9 85
Rio de Janeiro, 1 14 30
Santos, 1 24

Corrosive Sublimate—
Salonica, 3 c. £34

Cream of Tartar—
Natal, 2 c. £11
Wellington, 5 26
Brisbane, 4 cs. 5 kgs. 40

Disinfectants—
Pt. Elziabeth, 1 cs. £15
Brisbane, 15 cks. 27
Wellington, 26 37
Natal, 40 100 dms. 82
Adelaide, 6 11
Cape Town, 75 25

Guano—
Guadeloupe, 610 t. £6,100

Hydrochloric Acid—
Bushire, 1 cs. £2

Manure—
Madras, 20 t. £79
Cape Town, 350 1,820
Jersey, 121 13 c. 394
Natal, 10 24
Bordeaux, 1 10
Bermuda. 5 15

Nitrous Oxide—
Melbourne, 1 cs. £27

Phosphorus—
Wellington, 8 c. £84
Canary Is., 1 cs. 11

Potash—
Wellington, 14 c. £29

Potash Crystals—
Toronto, 2 cs. 5 cks. £47

Potassium Carbonate—
Auckland, 1 t. 3 c. £27
Cape Town, 12 19

Potassium Chlorate—
Melbourne, 1 t. 18 c. £46

Potassium Cyanide—
Brisbane, 6 cs. £41
Melbourne, 2 t. 224

Potassium Prussiate—
Boston, 10 cks. £161

Salicylic Acid—
Toronto, 1 cs. £12

Saltpetre—
Libau, 2 t. 19 c. £71
Oporto, 1 17 17
Sydney, 3 69
Corunna, 2 3 43
Rio de Janeiro, 2 13 62
Gibraltar, 25 312

Sheep Dip—
Falkland Is., 100 glns. £16
Hamburg, 1 c. 2
Odessa, 5 6
Cape Town, 2 t. 5 2,500 dms. 558
Algoa Bay, 1,175 610
B. Ayres, 8 18 1,750 cs. 5,480

Soda Alkali—
Rotterdam, 5 t. 9 c. £33

Sodium Acetate—
Brisbane, 1 t. 4 c. £25

Sodium Bisulphite—
Toronto, 1 t. 16 c. £11

Sodium Carbonate—
Cape Town, 10 c £16

Sodium Nitrate—
Jersey, 1 t. 3 c. £10

Sodium Sulphate—
Ghent, 55 t. £85

Sodium Tartrate—
Melbourne, 8 c. £23

Strontium Nitrate—
Yokohama, 10 c. £14

Sulphur—
Algoa Bay, 1 t. 7 c. 150 kgs. £78
Sydney, 10 48
E. London, 2 5 25

Superphosphates—
Cape Town, 2 t. £5

Tartaric Acid—
Melbourne, 1 t. 5 c. £141
Townsville, 3 17
Pt. Elizabeth, 1 7
Bombay, 7 37
Wellington, 1 7
Fremantle, 10 62
Karachi, 3 cs. 19
Calcutta, 2 14
E. London, 12 40
Adelaide, 1 t. 121

LIVERPOOL.
Week ending December 16th.

Alum—
Alexandria, 6 t. £30
Porto Alegre, 4 10 c. 3 q. 21
Sydney, 1 5
Melbourne, 2 13
Genoa, 2 9 11
B. Ayres, 1 2 5
Volo, 1 10 7
Bourgas, 10 18 49
Varna, 1 7 1 6
Lisbon, 5 7 3 25
Tripoli, 2 1 9
Salahora, 1 3 7
Smyrna, 14 1 2 75
Petrolia, 11 19 3 60
Cape Town, 4 10 23

Alumina Sulphate—
Portland, 16 c. 3 q. £10

Aluminous Cake—
Melbourne, Whf., 6 t. 4 c. 3 q. £19

Ammonium Carbonate—
Genoa, 1 t. 5 c. £35
Salonica, 3 4

Ammonium Chloride—
Alexandria, 3 t. £105
Bombay, 3 15 c. 124
St. John's, N.B., 1 13 40
Genoa, 3 54
Piræus, 10 20
Varna, 12 20
Trieste, 1 33
Volo, 1 34
Salahora, 3 6
Salonica, 1 2 30
Philadelphia, 10 200
Smyrna, 1 2 1 q. 41
Messina, 1 1 1 38
Samsoun 1 34
Syra, 4 8
Antwerp, 1 13 36

Ammonium Sulphate—
Montreal, 10 t. 4 c. 3 q. £43
Demerara, 262 1 1,955
Norfolk, Va., 25 8 3 190
Las Palmas, 50 17 385
Valencia, 30 17 234

Antimony—
Rio de Janeiro, 6 c. £10

Arsenic—
M. Video, 1 t. £33

Bleaching Powder—
Ancona, 12 cks. 14 hls.
Bahia, 6 cs.
Baltimore, 113
Bombay, 20 8 bxs.
Boston, 916
Calcutta, 158
Cape Town, 120
Colon, 21
Corunna, 4 brls.
Dunkirk, 18
Leghorn, 29
Lisbon, 82
Melbourne, 50
Nantes, 54
Naples, 42
Newport News, 70
New York, 489
Philadelphia, 244
Portland, 52
Port Natal, 20 dms.
Rio de Janeiro, 13
St. John, N.B., 17
San Francisco, 50
Venice, 25
Vera Cruz, 50

Boracic Acid—
Rotterdam, 5 c. £8
Hamburg, 2 11

Borax—
Syra, 5 c. £5
E. London, 2 t. 40
Rotterdam, 5 10 175
Copenhagen, 1 18 3 q. 36
Hamburg, 1 20

Calcium Chloride—
Odessa, 10 t. 5 c. £21
Brisbane, 5 3 12
Sydney, 5 1 12
Boston, 28 19 59

Carbolic Acid—
Antwerp, 6 t. £19
Hong Kong, 11 c. 2 q. 8
Yokohama, 2 10 163
San Francisco, 1 5 82
Algiers, 6 19
Trieste, 9 31
Rouen, 8 2 505

Carbonic Acid Gas—
Gibraltar, 9 c. £11

Caustic Potash—
Melbourne, 5 t. 2 c. £134
New York, 8 18 224

Caustic Soda—
Amsterdam, 20 dms.
Ancona, 39
Bahia, 8
Baltimore, 825
Barcelona, 363 25 cks.
Bilbao, 85
Bombay, 150
Boston, 60
B. Ayres, 275
Cabadello, 26
Callao, 80
Cartagena, S.A., 30
Catania, 38
Dunedin, 30 50 xs
Dunkirk, 35
Genoa, 681
Ghent, 4
Halifax, 68
Hamburg, 62
Havana. 105
Helsingford, 40
Hiogo, 208
Hong Kong, 31
Honolulu, 10
La Guayra, 20

Leghorn, 120
Marseilles, 90
Melbourne, 110
Messina, 120
M. Video, 69
Naples, 65
N. Orleans, 300
New York, 1,038
Oporto, 60
Paris, 30
Pelotas, 25
Pernambuco, 225
Philadelphia, 140
Pt. Elizabeth, 2
Port Natal, 3 cks. 20
Rio de Janeiro, 74
Rotterdam, 38
Porto Alegre, 2 brls.
Salaverry, 20
San Francisco, 150
San Sebastian, 12
San Juan, 10
Santos, 4
Shanghai, 48 jars
Seville, 35
Singapore, 30
Stamboul, 20
Sydney, 267 5
Tampico, 200
Tripoli, 58
Valencia, 17
Venice, 95
Wellington, 35

Chemicals *(otherwise unenumerated)*

Bordeaux, 1 t. 5 c. £36
Naples, 3 10 122
Piræus, 10 17
Cairo 2 70
New York, 5 17 2 q. 251
Palermo, 10 17
Christiania, 4 2 8
Philadelphia, 13 10 421

China Clay—

Bombay, 348 cks.
Boston, 2,375
Calcutta, 120
Lisbon, 150 bgs.
New York, 400
Philadelphia, 608 80
Portland, M., 240
Rio de Janeiro, 48

Chromium Trioxide—

Hamburg, 12 c. £38

Coal Products—

Aniline Colours

Barcelona, 2 kgs.
New York, 17 cks.

Aniline Oil

Barcelona, 15 brls.

Aniline Salts

Barcelona, 10 brls.
Boston, 6 cks. 20 cr.
Philadelphia, 95 5
Syra, 1

Creosote Oil

N. Orleans, 500 brls.

Naphtha

Melbourne, 30 tins.

Pitch

Rouen, 101 t.

Tar

Guayaquil, 50 dms.
Philadelphia, 150 brls.
St. John, N. B., 40
" " N'fd., 75

Copper Sulphate—

Piræus, 1 t. 6 c. 173
Cadiz, 18 3 q. 574
Hamburg, 9 12 3 41
Bari, 4 15 1 77
B. Ayres, 4 8 2 [illegible]
Porto Rico, 2 19 83
Florence, 9 18 163
Lisbon, 12 3 3 216
Salonica, 1 16
Messina, 5 4 3 85
Odessa, 3 1 52
Mexico, 1 1 1 27
Venice, 21 1 3 334
Christiania, 1 3 2 20
Melbourne, 1 10 26
Paris, 49 14 614
Algiers, 31 14 583
Genoa, 34 8 1 538
Naples, 20 1 332
Marseilles, 83 1 1,458
Leghorn, 3 1 4 } 230
Naples, 9 19
Barcelona, 20 1 3 335
Vera Cruz, 3 3 3 37
Cette, 488 7 1 8,604

Coppers —

Sydney, 1 t. 16 c. 1 q. £7
Salaberry, 1 10 4
Bourgas, 14 12 33
Varna, 4 14 11
Beyrout, 6 10 15
Beyrout (Syria), 7 7 12

Disinfectants—

Bombay, 1 t. £15
Algoa Bay, 8 c. 30

Magnesia—

Genoa, 1 q. £50

Magnesium Carbonate—

Rio de Janeiro, 2 c. £23

Manganese Chloride—

Genoa, 2 t. £5

Oxalic Acid—

Boston, 8 t. 15 c. £207

Paint—

Alexandria, 58 cks.
Calcutta, 3
Corinto, 5 cs.
Gibraltar, 1 76 kgs.
Hamburg, 3
H. Kong, 114 dms. 1
Kingston, 2 274
Larnaca, 2 11
Manaos, 8 brls. 30 2
New York, 2
Piræus, 9 dms.
Pisagua, 8
Ponce, 50
Port Natal, 2
Pram Pram, 5
St. John, N.B., 15 10 dms.
Saltpond, 20
San José de Guatemala, 200
Seville, 40 brls. 183
Valparaiso, 1 cs.
Yokohama, 30

Painters' Colours—

Alexandria, 1 cs. 30 kgs. 10 dms.
Bahia, 1
Beyrout, 3 cks.
Boma, 20 brls.
Bombay, 50
Boston, 93
B. Ayres, 40 40
N. York, 10 2 cs. 2 bxs 10 pks.
Para, 7 10 dms.
Patras, 5
Piræus, 1 ck. 40
Rotterdam, 3 cs.
Salahora, 1
Santos, 81 pks.

Paraffin Wax—

Aviles, 100 bgs.
Constantinople, 10 90 cs.
Lisbon, 140
Odessa, 20
Syra, 10

Phosphate Rock—

Stockholm, 60 t. 8 c. £2,650

Phosphorus —

Hong Kong, 2 c. £25
Shanghai, 1 t. 10 300
Hiogo, 2 509
Yokohama, 10 134

Potash Salts—

Corinto 4 t. 1 c. 2 q. £400

Potassium Bichromate —

Syra, 8 c. £20

Potassium Chlorate—

Sydney, 6 t. 12 c. £260
Hiogo, 13 12 430
Stettin, 1 10 60
Konigsberg, 4 159
Rotterdam, 2 15 103
Copenhagen, 15 572
Libau, 4 18 198
Kingston, Jam., 1 38
Hamburg 10 18
New York, 16 5 568
Boston, 2 10 86

Potassium Chloride —

Libau, 4 t. 18 c. £210
Hiogo, 12 10 438

Potassium Cyanide—

Mollendo, 9 c. 3 q. £74

Salt

Adjuah, 5 t. 800 sks.
Antwerp, 735 7,000
Axim, 2 160
Baltimore, 349
Barbadoes, 475
Boston, 160
B. Ayres, 100 cs.
Calcutta, 9 580
Cape Lahou, 8
Christiania, 110
E. London, 18
Egwanga, 40
Fredrikstadt, 250
Ghent, 120
Halifax, 100
Iquique, 15
Newcastle, 203
New York, 311 30
Opobo, 63 19
Para, 93 15
Philadelphia, 300
Rio de Janeiro, 2 2
Rotterdam, 588
St. John, N.B., 250
Shanghai, 17
Sydney, 113

Salt Cake—

Lisbon, 30 t. £60

Saltpetre—

Valparaiso, 4 t. 18 c. 1 q. £105
Manaos, 9 3 12
Cartagena, 1 10 35

Salinite—

Pasages, 10 t. 18 c. 2 q. £28

Sheep Dip —

Montreal, 1 ck. £7
B. Ayres, 24 t. 14 c. 623
Bombay, 2 5 30

Soap—

Accra, 150 bxs.
Addah, 20
Alexandria, 100 86 cs.
Algoa Bay, 1,491
Antwerp, 1,730
Assinee, 140
Axim, 160
Barbadoes, 800 4 t. 9 c.
Batavia, 1,000 4
Bayin, 105
Bombay, 290 103
Calcutta, 250 bdls. 8
Cape Coast, 224
Cape Town, 625
Colombo, 52
Constantinople, 25
Curacao, 200
Dixcove, 100
Delagoa Bay, 70
Demerara, 760
E. London, 774 50
Gd. Bassa, 266
Halifax, 200
Lagos, 70
Madras, 209
Malta, 30
N. Orleans, 141
New York, 950 43
Ottoboe, 55
Palermo, 1
Philadelphia, 3 cks.
Pt. Elizabeth, 30
Portland, 301
Pt. Natal, 880
Pram Pram, 100
Rangoon, 11 10
Rotterdam, 160 400
St. John, N.B., 1,300
St. John's, N'fd., 3 8
St. Thomas, 800
Salonica, 21
San Juan, 100
" Del Sur, 100
Sierra Leone, 100 2
Sapeli, 100
Singapore, 2,957 35
Teneriffe, 1,140
Trinidad, 850 1
Tocopilla, 14
Valparaiso, 200
Warri, 1,000
Shanghai, 1,452

Soda Alkali —

Barcelona, 150 brls.
Leghorn, 60
Lisbon, 60
Melbourne, 17
Portland, 75 351 pks.

Soda Ash—

Ancona, 30 bgs.
Antwerp, 13 cks. 1,420
Bahia, 30
Baltimore, 20 65 trs. 640
1,592 kgs.
Barcelona, 86
Bombay, 20
Boston, 122 31 1,599
B. Ayres, 490 brls.
Cadiz, 28
Calcutta, 200
Canea 200
Christiania, 10 133
Dunedin, 70
Genoa, 300
Ghent, 123 50
Gothenburg, 100
Halifax, 30
Hamburg, 240 300
Kobe, 123
Leghorn, 50
Melbourne, 149
New York, 128 tcs. 438
Philadelphia, { 43 866 4,184
100 brls.
Rio de Janeiro, 48
Rotterdam, 3 340
St. John's, N'fd., 14 tcs.
Smyrna, 120 brls. 730
Sydney, 9
Syra, 120

Soda Crystals—

Boston, 14 cs.
B. Ayres, 640 brls. 398 cs.
Calcutta, 83 kgs. 1
E. London, 67
Freemantle, 1
Honolulu, 40
M. Video, 50
Philadelphia, 301 146
Pt. Natal, 50
St. John, N.B., 50 25
Volo, 120
Woodstock, 100

Sodium Arseniate—

Portland, 6 cs.

Sodium Bicarbonate—

Amsterdam, 210 kgs.
Antwerp, 4 cs.
Bari, 10
Brisbane, 30 bgs.
B. Ayres, 173 34
Calcutta, 375 3
Cape Town, 40 8
Christiania, 90
Constantinople, 289 8
Corunna, 4 brls.
Dunedin, 310 100 bgs.
Freemantle, 40
Hamburg, 15
Havana, 20
Havre, 60
Kobe, 100
Malaga, 50
Malta, 20
Marseilles, 30
Melbourne, 817 4
M. Video, 40 8
Nagasaki, 200
Naples, 43
New York, 10
Perth, 30 25
Pt. Natal, 10
Rangoon, 175
Rio de Janeiro, 7
Rotterdam, 20 2
St. John, N.B., 450
San Francisco, 300 8
Sydney, 328
Syra, 12 brls.

Sodium Carbonate—

Boston, 336 brls.

Sodium Chlorate—

Boston, 75 kgs.

Sodium Phosphate—

Vera Cruz, 2 cks.

Sodium Silicate—

Barcelona, 100 kgs.
Boston, 200
B. Ayres, 32 cks.
Constantinople, 10
Corfu, 20
Freemantle, 20
Malta, 8
Marseilles, 4
Newcastle, 24 dms.
Piræus, 16
Stamboul, 30
Valencia, 300
Vigo, 4
Volo, 10 cs.

Sodium Sulphate—

Bombay, 200 kgs.
Portland, Me., 14 cks.

Starch—

Pt. Elizabeth, 20 cks.
St. John's, N'fd., 20 cs.

Sulphur—

Cartagena, 12 c. 1 q.
Natal, 15
Boston, 230 t. 30
Sulphuric Acid—
Christiania, 17 c.
Cabedello, 30 glss.

Superphosphates—

Cullera, 225 t. £
Valencia, 130

Varnish—

Bourgas, 1 cs.
Kustendjie, 1
St. John, N.B., 12 cks.
Seville, 5
Sanaos, 10
Valparaiso, 9

White Lead—

Barbadoes, 1 ck.

Zinc Chloride—

Bombay, 2 t. 3 c. £

Zinc Oxide—

Parahyba de Norte, 7 c. 3 q.

MANCHESTER.

Week ending December 16th.

Ammonium Carbonate—
Rotterdam, 4 cks.

Ammonium Chloride—
Bussorah, 15 cks.

Aniline Colours—
Hamburg, 5 kgs.
Rotterdam, 1 cs.

Aniline Oil—
Antwerp, 3 dms.

Aniline Salts—
Bombay, 1 kg.

Asbestos—
Bombay, 1 cs. 5 coils.

Benzol—
Rotterdam, 49 cks.

Carbolic Acid—
Bombay, 30 dms.

Caustic Soda—
Bombay, 1 dm.

Chemicals *(otherwise undes.)*—
Danzig, 10 cks. 30 kgs.
Hamburg, 2
Rotterdam, 4

Colours—
Rotterdam, 3 kgs.

Copperas—
Bushire, 10 brls.

Glue—
Antwerp, 10 cks.
Rotterdam, 20
Gothenburg, 10 bgs.

Manganese—
Sydney, 10 c.

Pitch—
Marseilles, 1,480 t.

Pyridine—
Rotterdam, 10 cks.

Salt—
Rotterdam, 200 t.

Starch—
Bombay, 6 cks.

Tar Oil—
Antwerp, 1 ck.

Toluol—
Hamburg, 25 cks.
Rotterdam, 32 20 dms.

HULL.

Week ending December 12th.

Alkali—
Bergen, 2 cks. 3 bls.
Helsingfors, 6
Stettin, 8

Ammonium Sulphate—
Ghent, 50 bgs.

Benzol—
Rotterdam, 46 cks.

Bleaching Powder—
Stettin, 58 cks.

Carbolic Acid—
Amsterdam, 48 cks.

Chemicals *(otherwise undescribed)*
Antwerp, 6 cks.
Amsterdam, 16
Bremen, 2
Bergen, 6 pks.
Christiania, 56 6 cs. 5 dms.
1,630 slbs.
Copenhagen, 1
Drontheim, 5
Gothenburg, 1 18
Hamburg, 28 244 10
Libau, 30
New York, 51 35
Reval, 5
Rotterdam, 15 104 10
Stettin, 123 bgs.
Riga, 53

Cottonseed Oil—
Antwerp, 715 c.
Amsterdam, 1,212
Bremen, 35
Dunkirk, 303
Gothenburg, 50
Hamburg, 500
Rotterdam, 655
Stettin, 24
Copenhagen, 70

Dyestuffs *(otherwise undes.)*—
Christiania, 5 cks.
New York, 1
Reval, 3 cs.
Stettin, 4 1
Stockholm, 10

Glue—
Gothenburg, 10 bgs.
New York, 56 cks.

Guano—
Dunkirk, 27 t.

Linseed Oil—
Antwerp, 100 c.
Amsterdam, 212
Bergen, 32
Christiania, 193
Christiansund, 29
Copenhagen, 52
Drontheim, 70
Hamburg, 52

Manure—
Harburg, 800 t.
Stolpemunde, 430

Painters' Colours—
Antwerp, 27 cks. 3 pks.
113 dms.
Bremen, 5
Bergen, 80
Christiania, 18 2
Copenhagen, 4 cs.
Dunkirk, 10
Drontheim, 70
Gothenburg, 1
Hamburg, 2
Harlingen, 5
Helsingfors, 1
New York, 343
Rotterdam, 10
Riga, 1
Stockholm, 3

Pitch—
Antwerp, 363 t.
Dunkirk, 175
Rotterdam, 10 cks.

Soap—
Christiania, 1 cs.

Starch—
Copenhagen, 50 cs.

Tallow—
Dunkirk, 133 cks.

Tar—
Antwerp, 6 cks.
Dunkirk, 105
Rotterdam, 5
Stettin, 5

Treacle—
Drontheim, 10 cks.
Helsingfors, 20 brls.

Turpentine—
Amsterdam, 3 dms.

Varnish—
Antwerp, 3 cks. 7 cs.
Danzig, 3
Gothenburg, 1
Norrkoping, 3
Reval, 4
Riga, 1
Stettin, 9

GLASGOW.

Week ending December 17th.

Alizarine—
Sherbrooke, £32. 17s.

Alkali—
Pittsburg, 9 t. 4 c.

Ammonium Sulphate—
Calcutta, 4 t. 4¾ c.
Nantes, 25 14¼
Demerara, 30 8¾
Baltimore, 101 10
Barcelona, 19 18¼
Cullera, 75 7¼
Torredel Mar, 152 ¾
Valencia, 50 12¾

Bleaching Powder—
Calcutta, 31 t. 17 c.

Borax—
Melbourne, £40

Carbolic Acid—
Brisbane, £30

Casto Oil—
St. John's, N'fld., 18 brls.
Malta, 7 t. 5¼ c.

Caustic Soda—
Calcutta, 16 t. 5 c.
Brisbane, 1,200 lbs.

Coal Products—
Pitch
Venice, £1,505
Baltimore, 50
Tar
St. John's, N'fld., 20 brls. 40 hf.-brls.

Coal Products *(otherwise undes.)*—
Germany, £145
Amsterdam, 190

Extracts—
S. Australia, £26

Farina—
Rio de Janeiro, 2 t. 1¾ c.

Gelatine—
New York, £1,042

Linseed Oil—
Pt. Elizabeth, 1 t.
Valparaiso, 4 6½ c.
Brisbane, 2 8¾
Rio de Janeiro, 18¾

Manganese—
Rotterdam, 10 t. 7 c.

Manure—
Bordeaux, 8 t. 1¾ c.

Paint—
Valparaiso, £20
Calcutta, 140
Ad-laide, £69 12s.

Painters' Colours—
Malta, qty.
Pt. Elizabeth, £29
Brisbane, £28. 12s.
Melbourne, £22

Paraffin Wax—
Antwerp, £50
Fiume, 1,433
Trieste, 190
Venice, 120
Marseilles, 45
Riga, 185
Barcelona, 350

Potassium Bichromate—
Amsterdam, £164
Rotterdam, 21

Soap—
E. London. 5 t.
St. John's, N'fld., 80 bxs.

Sodium Bichromate—
Nantes, 10 t. 13 c.

Starch—
Rotterdam, 10 c.
Rio de Janeiro, 2 t. 2¼

Tallow—
St. John's, N'fld., 1 bx.

Treacle—
Algoa Bay, 1 t. 5 c.
E. London, 1 5
Christiania, 35 5

TYNE.

Week ending December 12th.

Alkali—
Christiania, 29 t. 18 c.
Leghorn, 8 8
Gothenburg, 5 9
Rotterdam, 2 7

Alum Waste—
Copenhagen, 10 t.
Odense, 4 18 c.
Horsens, 9 17

Ammonium Sulphate—
New York, 51 t.

Antimony—
New York, 45 t.
Antwerp, 1
Christiania, 6 c.
Rotterdam, 4

Asbestos—
Christiania, 1 c.

Barium—
New York, 12 t. 9 c.

Bleaching Powder—
New York, 50 t. 6 c.
Antwerp, 35 2
Bergen, 10 5
Christiania, 47 2
Rotterdam, 8 18
Helsingfors, 50 1

Borax—
Aarhuus, 1 t. 3 c.

Caustic Soda—
New York, 247 t. 9 c.
Antwerp, 51 1
Christiania, 10 3
Bilbao, 10 5
Rotterdam, 10 10
Abo, 3 10
Helsingfors, 49 3

Gypsum—
New York, 37 t. 8 c.

Litharge—
Antwerp, 10 c.
Copenhagen, 11
Gothenburg, 2 t. 15

Magnesia—
New York, 1 t. 6 c.

Manganese Oxide—
Arendal, 1 c.

Ochre—
Christiania, 1 t. 12 c.

Paint—
New York, 23 t.
Genoa, 2 c.
Rotterdam, 1 1

Soda—
Antwerp, 12 t.
Leghorn, 10
Christiania, 25 2 c.
Oporto, 3
Rotterdam, 45 7

Soda Ash—
Gothenburg, 10 t. 4 c.
Konigsberg. 101
Helsingfors, 20 11
Abo, 20 9

Sodium Bicarbonate—
Bergen, 4 q.

Sodium Hyposulphite—
New York, 25 t.

Sodium Sulphate—
Tuborg, 204 t.

Sulphur—
Christiania, 200 t.
Gothenburg, 50

White Lead—
Oporto, 2 t. 5 c.

GOOLE.

Week ending December 9th.

Benzol—
Boulogne, 23 cks.
Rotterdam, 74

Chemicals *(otherwise undescribed)*
Amsterdam, 1 cs.
Boulogne, 3 cks.
Harlingen, 10

Coal Products *(otherwise unaes.)*—
Amsterdam, 49 cks. 20 pks.
Antwerp, 3
Boulogne, 32 1 cs.
Ghent, 22
Hamburg, 1
Rotterdam, 1

Colours—
Calais, 2 cs.
Dunkirk, 10 dms.
Rouen, 1

Dyestuffs *(otherwise undescribed)*
Boulogne, 1 cs.
Ghent, 11 cks.

Manure—
Dunkirk, 173 bgs.
Ghent, 92
Ostend, 500

Pitch—
Antwerp, 98 t.

GRIMSBY.

Week ending December 12th.

Alkali—
Rotterdam, 10 cs.

Caoutchouc—
Malmo, 2 bls.

Chemicals *(otherwise undescribed)*
Antwerp, 193 bgs.
Rotterdam, 1 ck.
Dieppe, 2 2 cs.
Hamburg, 34 dms. 23 8 pks.

Coal Products *(otherwise undes.)*—
Dieppe. 82 cks. 2 cs.
Hamburg, 8 pks.

Colours—
Antwerp, 2 cks. 2 cs.
Hamburg, 4 2
Malmo, 4 tins
Rotterdam, 2

Pitch—
Antwerp, 69 t.

Varnish—
Dieppe, 1 ck.

PRICES CURRENT. WEDNESDAY, DECEMBER 23RD, 1896.

PREPARED BY MESSRS. HIGGINBOTTOM AND CO., 116, PORTLAND STREET, MANCHESTER.

The values stated are F.O.R. at maker's works, or at usual ports of shipment in U.K. The price in different localities may vary

	£	s.	d.
Acids :—			
Acetic, 25 % and 40 % .. .. per cwt.	5/10½ &		8/9
,, Glacial .. .. ,,			0/-
Arsenic S.G., 2000° .. .. ,,	1	4	0
Fluoric .. .. per lb.	0	0	3¼
Muriatic (Tower Salts), 30° Tw. .. .. .. per bottle	0	0	10
,, (Cylinder), 30° Tw. .. .. ,,	0	3	0
Nitric 80° Tw. .. .. per lb.	0	0	1⅝
Nitrous .. .. ,,	0	0	1¾
Oxalic .. .. nett ,,	0	0	3½
Phosphoric, 1750° .. .. ,,	0	0	11½
Picric .. .. ,,	0	0	11
Sulphuric (fuming 50 %) .. .. per ton	15	10	0
,, (monohydrate) .. .. ,,	5	10	0
,, (Pyrites, 168°) .. .. ,,	3	0	0
,, ,, 150° .. .. ,,	1	5	0
,, (free from arsenic, 145°) .. .. ,,	1	7	6
Sulphurous (solution) S.G. 1025 .. .. ,,	3	0	0
Tannic (pure) .. .. per lb.	0	1	2½
Tartaric .. .. ,,	0	1	1
Arsenic, white powdered .. .. nett per ton	24	0	0
Alum (loose lump) .. .. ,,	4	10	0
Alumina Sulphate (pure) .. .. ,,	4	10	0
Aluminoferric .. .. ,,	2	5	0
Aluminium (Ingot metal 98/99¼ %) .. .. nett per cwt.	8	8	0
Ammonia, Anhydrous .. .. per lb.	0	1	4
,, ·880=28° B. .. .. ,,	0	0	2¾
,, =24° B. .. .. ,,	0	0	1¾
,, Carbonate .. .. nett ,,	0	0	3
,, Muriate .. .. per ton	20	0	0
,, ,, (sal-ammoniac) 1st & 2nd .. per cwt.	37/- &		35/-
,, Nitrate .. .. per ton	33	0	0
,, Phosphate .. .. per lb.	0	0	4¼
,, Sulphate (grey) London .. .. .. per ton	7	13	9
,, ,, (grey) Hull .. .. ,,	7	10	0
Aniline Oil (pure) .. .. per lb.	0	0	9¼
Aniline Salt ,, ... ,,	0	0	8¾
Antimony .. .. per ton	30	15	0
,, (tartar emetic) .. .. per lb.	0	0	9¾
,, (golden sulphide) .. .. ,,	0	0	10
Barium Chloride .. .. per ton	7	0	0
,, Carbonate (native) .. .. ,,	3	10	0
,, Sulphate (native levigated) .. .. .. ,,	42,6 to 65/-		
Bleaching Powder, 35 % .. .. nett ,,	6	12	6
,, Liquor, 7 % .. .. ,,	3	10	0
Bisulphide of Carbon .. .. ,,	13	10	0
Chromium Acetate (crystal) .. .. per lb.	0	0	6
Calcium Chloride .. .. per ton	2	2	6
China Clay (at Runcorn) in bulk .. .. .. ,,	15/- to 30/-		
Coal Tar Products and Dyes :—			
Alizarine (artificial) 20 % .. .. .. nett per lb.	0	0	7
Magenta .. .. ,,	0	3	0
Anthracene, 30 % A, f.o.b. London .. per unit per cwt.	0	0	9
Benzol, 90 % .. .. per gallon	0	2	8
,, 50/90 ,, ... ,,	0	2	5
Carbolic Acid (crystallised 40°) .. .. .. per lb.	0	0	7½
,, (crude 60°) .. .. per gallon	0	2	1
Creosote (ordinary) .. .. ,,	0	0	2
,, (filtered for Lucigen light) .. .. .. ,,	0	0	2½
Crude Naphtha 30 % @ 120° C. .. .. .. ,,	0	1	1
Grease Oils, 22° Tw. .. .. per ton	2	10	0
Pitch, f.o.b. Liverpool or Garston .. .. .. ,,	1	8	0
Solvent Naphtha, 90 % at 160° .. .. .. per gallon	0	1	7
"Lucigen" and "Wells" Oils .. .. .. ,,	0	0	0
Copper .. .. per ton	48	12	6
,, Sulphate .. .. ,,	17	15	0
,, Oxide (copper scales) .. .. ,,	42	10	0
Glycerine (crude) .. .. ,,	37	10	0
,, (distilled S.G. 1250°) .. .. ,,	70	0	0
Iodine .. .. nett, per oz.	0	0	9
Iron Sulphate (copperas) .. .. per ton	1	10	0
,, Sulphide (antimony slag) .. .. ,,	2	0	0
Lead (sheet) for cash .. .. ,,	12	15	0
,, Litharge Flake (ex ship) .. .. ,,	14	10	0
,, Acetate (white ,,) .. .. ,,	21	10	0
,, ,, brown ,,) .. .. ,,	15	0	0
,, Carbonate (white lead) pure .. .. ,,	16	10	0
,, *Nitrate* .. .. ,,	18	10	0
Lime, Acetate (brown) (ex ship) .. .. .. per ton	4	10	0
,, ,, (grey) (ex ship .. .. ,,	8	2	6
Magnesium (ribbon and wire) .. .. per oz.	0	2	7
,, Chloride (ex ship) .. .. per ton	2	7	6
,, Carbonate .. .. per cwt.	1	17	6
,, Calcined Magne .. .. per ton.	8	15	0
,, Sulphate (Epsom Salts) .. .. .. per ton	2	15	0
Manganese, Sulphate .. .. ,,	16	10	0
Borate .. .. per cwt.	2	10	0
,, Ore, 70 % .. .. per ton	3	10	0
Methylated Spirit, 61° O.P. .. .. per gallon	0	1	8
Naphtha (Wood), Solvent .. .. ,,	0	2	6
,, ,, Miscible, 60° O.P. .. .. .. ,,	0	2	11
Oils :—			
Cotton-seed .. .. per ton	16	10	0
Linseed .. .. ,,	17	10	0
Petroleum, American .. .. per gallon	0	0	7
Stearine .. .. per ton	20	0	0
Phosphorus (yellow) .. .. per lb.	0	1	2
,, (red) .. .. ,,	0	2	8
Potassium (metal) .. .. per oz.	0	3	7
,, Bichromate .. .. nett per lb.	0	0	4¾
,, Carbonate, 90% (ex ship) .. .. .. per ton	17	15	0
,, Chlorate .. .. per lb.	0	0	4¼
,, Cyanide, 98% .. .. ,,	0	0	11½
,, Hydrate (Caustic Potash) .. 90 % .. per ton	24	5	0
,, ,, (Caustic Potash) 75/80 % .. ,,	21	0	0
,, ,, (Caustic Potash) 70/75 % .. ,,	20	0	0
,, Nitrate (refined) .. .. per cwt.	1	1	0
,, Permanganate .. .. per cwt.	3	17	6
,, Prussiate Yellow .. .. per lb.	0	0	5¾
,, Sulphate, 90 % (ex ship .. .. .. per ton	9	15	0
,, Muriate, 80 % (do.) .. .. .. ,,	8	10	0
Silver (metal) .. .. per oz.	0	2	5¾
Sodium (metal) .. .. per lb.	0	2	11
,, Carb. (refined Soda-ash) 48 % .. nett per ton	4	15	0
,, ,, (Caustic Soda-ash) 48 % .. .. ,,	4	5	0
,, ,, (Carb. Soda-ash) 48% .. .. ,,	4	0	0
,, ,, (Alkali) 58 % .. .. .. ,,	3	10	0
,, ,, (Soda Crystals) .. .. .. ,,	2	0	0
,, Acetate (ex-ship) .. .. ,,	14	5	0
,, Arseniate, 45 % .. .. ,,	14	10	0
,, Chlorate .. .. per lb.	0	0	5
,, Borate (Borax) .. .. net, per ton	19	0	0
,, Bichromate .. .. ,, per lb.	0	0	3¾
,, Hydrate (77 % Caustic Soda) (f.o.b.) net per ton	9	0	0
,, ,, (74 % Caustic Soda) ,, ,, ..	8	0	0
,, ,, (70 % Caustic Soda) ,, ,, ..	7	2	6
,, ,, (60 % Caustic Soda) .. ,, ..	6	2	6
,, ,, (pure liquor 90° Tw.) .. ,, ,,	3	15	0
,, ,, 77/78 % powdered (99 % hydrate) ,,	13	10	0
,, Bicarbonate .. .. ,,	6	10	0
,, Hyposulphite .. .. ,,	5	5	0
,, Manganate, 25% .. .. ,,	15	0	0
,, Nitrate (95 %) ex-ship Liverpool .. .. per cwt.	0	7	9
,, Nitrite, 98 % .. .. per ton	30	0	0
,, Phosphate .. .. ,,	12	10	0
,, Silicate (glass) .. .. per ton	4	10	0
,, ,, (liquid, 100° Tw.) .. .. .. ,,	3	10	0
,, Stannate, 40 % .. .. per cwt.	3	2	9
,, Sulphate (Salt-cake) .. .. per ton.	1	1	0
,, ,, (Glauber's Salts) .. .. ,,	1	10	0
,, Sulphide .. .. ,,	6	15	0
,, Sulphite .. .. ,,	5	0	0
Strontium Hydrate, 100% .. .. ,,	8	0	0
Sulphocyanide Ammonium, 95 % .. .. per lb.	0	0	6½
,, Barium, 95 % .. .. ,,	0	0	4¾
,, Potassium .. .. ,,	0	0	6¾
Sulphur (Flowers) .. .. per ton.	7	10	0
(Roll Brimstone) .. .. ,,	6	10	0
,, Brimstone : Best Quality .. .. .. ,,	4	15	0
Superphosphate of Lime (26% .. .. ,,	2	15	0
Tallow .. .. ,,	18	5	0
Tin Crystals .. .. per lb.	0	0	4¾
,, English Ingots .. .. per ton	62	10	0
Zinc Spelter) .. .. ,,	17	17	6
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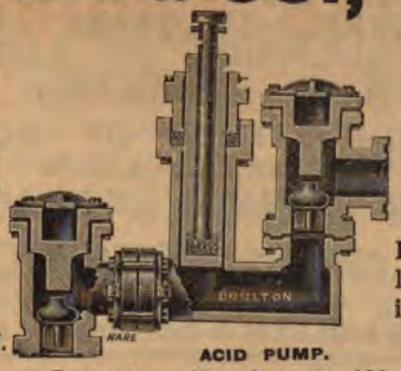

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PURE MINERAL ACIDS, ACETIC ACID, ACETATES.
SULPHUR "CROWN" BRAND.
Johnson & Hooper, Stratford, London.

RTANT TO FARMERS, SEED, GRAIN & POTATO MERCHANTS.

(20,655).
A New Labour-Saving Appliance.

1 Sack Holder,
4, 6, and 8 Bushel Sacks.
5ft. 6in. by 2ft. 4in.
Weight, 49 lbs.
... ... £1 5s.

2 Sack Holder,
½, 1, and 2 Bushel Sacks.
4ft. 4in. by 2ft. 2in.
Weight, 42 lbs.
... ... £1 2s. 6d.
Carriage Paid.
Holders can be adjusted to any size of Sack.
DERS made in different sizes.

With this Machine one can do the work of two in filling Sacks. It is simple in construction, and not liable to get out of order; is easily managed, and adjustable to any kind of Sack. It is invaluable to Farmers, Seed, Grain and Potato Merchants, Oil and Colourmen, Druggists, and Chemical Manufacturers, and can be easily carried about with ease by a lad. The saving of actual labour in filling Sacks of any material will quickly cover the cost of the Machine.

Illustrated Price Lists on application.

Samples may be seen at the Office this paper.

Central Plaster, Whiting, and Salt Depot,
Brewer Street, Port Street, Manchester, February 8th, 1896.

J. M'DOWALL & Co.,
Berkeley Street, Glasgow.

DEAR SIRS,—We have been using your Sack Holder for some time now, and we find them a great labour

Yours Respectfully, E. READ & SONS.
(A. E. READ.

Makers: J. M'DOWALL & CO., 230, Berkeley St., GLASGOW.

AGENTS WANTED

Tender.

TO TAR DISTILLERS, &c.

THE Directors of the Ashton Gas Company invite TENDERS for the PURCHASE of the Surplus TAR and AMMONIACAL LIQUOR to be produced at their Works during twelve months, commencing the 1st day of August next.

Tenders, sealed and endorsed, must be delivered before twelve o'clock at noon on Monday, the 20th instant, addressed to the Chairman.

Further information may be obtained from
BARDSLEY ELSON, Secretary.
Gas Offices, Ashton-under-Lyne,
July 4th, 1896.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office are forwarded to Advertisers, post free.**

A YOUNG CHEMIST (23), desires Appointment as Assistant in Works or Public Laboratory; good Analyst, Assayer, and Bacteriologist; excellent references.—Address, "Assistant," *Chemical Trade Journal* Office, Manchester.

THE Advertiser seeks Post in Metallurgical, O.V. Manure, or Wood Distilling Works, in charge of Laboratory or Works; experienced chemist.—Address, "Research," *Chemical Trade Journal* Office, Manchester.

TO CHEMICAL, PAPER, and other MANUFACTURERS. Wanted appointment as Works Manager, Chemist, or position of trust, by Practical Chemist with 14 years' experience in Alkali, Paper, Copper and other works. Good technical knowledge of chemical processes, paper making, also used to machinery and men.—Address, "W." *Chemical Trade Journal* Office, Manchester.

WANTED, Situation in Chemical Works as FOREMAN. Practical experience in the Manufacture of Sulphuric and other Acids, &c., &c.; good testimonials.—Address "F. B. W.," *Chemical Trade Journal* Office, Manchester.

CARBONATE OF AMMONIA.—Wanted, a Man of experience in the Manufacture of Carbonate of Ammonia.—Address, "T. W.," *Chemical Trade Journal* Office, Manchester.

BOILERS, ENGINES, PUMPS, Cast and Wrought-iron TANKS, VACUUM and STEAM PANS, and every description of Second-hand PLANT and MACHINERY. Catalogues sent free on application.—Henry Roberts & Co., Engineers and Copper smiths Bancroft Road, Mile End, London, E.

LIQUID CHLORIDE OF ZINC. For Sale, a large quantity of above, strength about 120° Twaddell.—Apply Chloride Electrical Storage Syndicate, Ltd., Clifton Junction, Manchester.

NINE per cent. Nickel Deposits in Norway.—Apply to THORVALD M. MOE, Drontheim.

RAILWAY TANK WAGONS for HIRE; capacity, 2,000 gallons.—Apply to Brotherton and Co., Ammonia Distillers, Leeds.

SALT or CHEMICALS—To be Let on long Lease, an Eligible SITE for SALT or CHEMICAL WORKS, in the Cheshire Salt District, with magnificent supply of natural Brine of highest strength.—Address in first instance, Davis Bros., 37, Blackfriars-street, Manchester.

WANTED, Second-hand Pug Mill or Mixer. Must be in good condition and cheap. Address, W. Davison, 91, Shad Thames, London, S.E.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, London, E.

Miscellaneous.—Cont.

IT IS WORTH YOUR WHILE TO BUY DIRECT. THE RELIANCE LUBRICATING OIL COMPANY SUPPLY, ON APPROVAL, HIGH-CLASS HYDRO-CARBON NON-CORROSIVE LUBRICANTS, which, through the superiority, have the largest sale in the world. Engine, Cylinder, and Machinery Oils, 11½d.; Spindle Oil, 9½d.; Loom Oil, 10½d.; Extra Special Cylinder Oil, 1s. 4d.; Extra Special Engine Oil, 1s. 4d.; Gas Engine and Dynamo Oils, 1s. 6d. per gallon; Light Machine Oil, 10½d.; barrels free and carriage paid.—Reliance Lubricating Oil Co., 19 and 22, Water Lane, Great Tower Hill, London, E.C. Depôts at Liverpool, Bristol, Hull, Cardiff, and Glasgow. Telegrams: "Subastral, London."

TO BE SOLD, the LANCASHIRE MANURE COMPANY'S WORKS at Widnes with Machinery and 24,420 square yards of Freehold Land. Address J. Hosking, 16, Fenwick Street Liverpool.

£700 will buy Chemical Works, a few miles outside Manchester, with good Canal and Railway accommodation; also a large house attached, containing nine bedrooms, &c., &c., which could be used as residence or for offices, storerooms, &c. Also the following Plant included:—10 large Wooden Vats, Steam Boiler, Vertical Pump (Pearn's), Steam Engine, 2 large Phosphate Vats, Chemic Apparatus for making Bleaching Liquor; Pump for working same. Hoist, Grindstone, lot of Piping, Shafting, Stables, &c., &c. Mortgagee wishes to realise.—Apply Box 141 G.P.O., Manchester.

PLATINUM Utensils, Scrap, Lamp Ends, etc. Best Prices given by Derby and Co. 44, Clerkenwell Road, London, E.C. N.B.—Platinum Sold

TO BE SOLD, Cheap, a WORKS, a few miles out of Manchester, suitable for Manufacturing Chemicals; canal and railway accommodation; a large house attached; splendid position for manufacturing any secret process.—Apply for full particulars "Box 36," *Chemical Trade Journal* Office, Manchester.

"UP-TO-DATE" RECIPES, NEW INVENTIONS AND SPECIALITIES in Oils, Greases, Soaps, Paints, Varnishes, Enamels, Blackings, Blues, Polishes, etc., etc., practical working recipes with latest improved English, Continental and American methods, Prize and Gold Medal brands, Cheapened Substitutes, Utilization of Wastes and Refuse, etc.; any samples matched. Write for Lists.—Lewis Jameson & Co. Balmoral-buildings, 91, Queen Victoria-street, London, E.C., and at 47, College-street, Islington, London, N.

FOR SALE.—One 3ft. dia. DISINTEGRATOR for grinding bones, chemicals, paints, etc.; One 4ft. dia. Disintegrator for grinding bones, chemicals, paints, and coal. One 9 x 5 Blake STONE BREAKER. One Ball MILL for cements, phosphates, etc. A large quantity of Elevator Chains and Buckets at very low prices.—Apply, C. E. Hall, 55, Norfolk-street, Sheffield.

DISINTEGRATORS.—A New Machine for £12., second to none, with 18 inch grinding chamber. Also Mortar Mill, 5ft. 6in. pan; for £28. A 10 x 6 New Stone Breaker, for £28.; larger sizes in proportion, or can be had on hire, with option of purchase.—Mason Bros., late S. Mason and Co., Stone Breaking and Grinding Machine Makers, Brandon-street, Leicester.

AMMONIA, all qualities and strengths. Enquiries solicited. BROTHERTON & Co., Birmingham, Leeds, and Wakefield

Advertisements which arrive too late for insertion on this page will be found on first page of Matter (opposite Leading Article).

THE "LANCASTER"

STEAM TRAPS AND PISTONS

ARE ALWAYS SENT ON APPROVAL.

LANCASTER & TONGE, Ld., Pendleton

BLAYDON MANURE AND ALKALI COMP.'S

PURE WHITE SULPHATE OF ALUMI
BLANC FIXE, CHLORIDE, NITRATE,
AND SULPHIDE OF BARIUM.

UNITED ALKALI COMP.'S

HYPO-SULPHITE OF SODA,

WALTHER FELD & CO.'S

PURE PRECIP. CARBONATE OF BARYTES 96

Also Hydrate and Anhydrous Alumina, Chloride and Carbonate Alumina, Aluminate of Soda, Hydrate of Barium, &c.

Agents: JULIUS HULSEN & CO., NEWCASTLE-ON-TY

ALL SIZES OF CARBOYS KEPT & KINDS & HAMPERS IN STOCK.

BINDLEY & SON, Ltd.,
GLUE, GELATINE, and
Size Manufacturers.
Works: SMETHWICK, BIRMINGHAM.
Northern Office: 224, Effingham Road, Sheffield.

HARPER'S LIST

OF ACCESSORIES for the TRANSMISSION of POWER, viz.:—BELT PULLEYS, ROPE PULLEYS, GEAR WHEELS, SHAFTING, COUPLINGS, PEDESTALS, FIXINGS; appears on Pages 14 and 15 of the first *Chemical Trade Journal* of each month.

TUBES

IRON and STEEL (butt or lap welded), and FITTINGS for Gas, Water, Steam, Liquid Ammonia, and Hydraulic Work, galvanized white enamelled inside, or coated by Dr. Angus Smith's Composition. In stock to 8in. diameter.

COILS for heating, super-heating, distilling and refrigerating purposes, to 500 feet long without joints.

JOHN SPENCER,
Globe Tube Works, Wednesbury, and 16, Great St. Thomas Apostle, Cannon-st., London, E.C.

ALBUMENS, Pastes, Arabic Solu
Vegetable and Animal Size, G
GLUES, PREPARED PITHS, Pr
tated Bone Phosphate, Neatsfoo
Greases, Manure Materials, &

W. KING, Benson St., LIVERP

OLD PLATINU

In any form Purch
for Cash.
Highest prices allowed i
ROBERT PRINGLE &
Gold and Silver Refiners, &
40 & 42, Clerkenwell Road,
Send for Price List.
Photographic Residues reliab
Purchased.

GAS PURIFICATIO

BEST
Absorbent of Sulphuretted Hydr
(As supplied to Manchester Corporation & other Ga

JAMES E. CAMPBELL (Patentee),
Contractor and Manufacturer,
525, Stretford Road, Old Trafford, Manche

Manlove, Alliott & Co. L
ENGINEERS,
NOTTINGHAM.

See Advertisement in first issu
this month.

BRYAN CORCORAN, L
MILLSTONE BUILDE

WIRE WEAVER, MACHINE MANUFA
AND GENERAL MILL FURNISH
Sole Maker of MILBURN'S
Patent Conoidal Stone Grinding
Especially suitable for ser
materials, Wet or Dry.
Works and Warehouses:
Back Church Lane. *Parcel Dept.:* Basement
Corn Exchange
31, MARK LANE, LONDO

Liverpool: Exchange Chambers
Glasgow: West Campbell-st.

CANNINGTON, SHAW & CO., LIMITED,

CARBOYS.

SHERDLEY GLASSWORKS, ST. HELENS.

WALKER BROS.,

ENGINEERS, PAGEFIELD IRONWORKS,

WIGAN.

WALKERS' PATENT

AIR COMPRESSING ENGINES.

GAS COMPRESSING ENGINES.

150,000 I.H.P. ALREADY AT WORK.

WALKERS' PATENT

EXHAUST AND BLAST FANS.

SPENCE'S ALUM.

PETER SPENCE & SONS,

Manchester Alum Works, MANCHESTER.

R. W. GREEFF & CO.,

EASTCHEAP, LONDON, E.C.

IMPORTERS OF

PUREST SULPHATE OF ALUMINA.

FLUORIDE OF CHROME (Patented). ANTIMONY SALTS.

TARTAR EMETIC. HYPOSULPHITE OF SODA.

SUGAR OF LEAD, WHITE AND BROWN.

ZINC OXIDE, OXALIC, ACETIC, TANNIC, & SALICYLIC ACIDS, NITRATE & CHLORIDE OF BARIUM, &c.

SPECIALITIES:—

SODA ASH 58% POTASHES SALTCAKE BLEACH LITHIA SALTS BORAX MERCURIALS SUL. COPPER PRUSSIATES CYANIDES METALS MINERALS BRIMSTONE SULPHUR

Phosphoric Acid Acetates Oxalic Acid Tartaric Acid Salicylic Acid Carbolic Acid Camphor Stearine Glycerine OLEINE

Castor Oil Olive Oil Essent. Oils Glucose Grape Sugar Cane Syrup Treacle Nitrate of Silver (Pure)

Amidol, Metol, Glycin, Thiocarbamid and other Photographicals, Lumieres, Dry Plates, &c., &c.

IMPORTERS—Commission Merchants—EXPORTERS.

Telephone No. 1050.

FUERST BROS.,

LONDON: 17, Philpot Lane, E.C.

Telegrams—"FUERST, LONDON."

HEADQUARTERS FOR ALL HEAVY OR FINE CHEMICALS,

Pharmaceutical Products,

Photographic Developers,

Drysalteries and Drugs,

Also OILS and PRODUCE.

SAMPLES AND PRICES ON APPLICATION.

CORRESPONDENCE SOLICITED.

Tenders.

MANCHESTER CORPORATION GAS WORKS.

SPENT OXIDE.

THE Gas Committee of the Corporation of Manchester are prepared to receive TENDERS for the Purchase and immediate Removal of about 500 Tons of SPENT OXIDE, now lying at the Bradford Road Gas Works. The Committee do not bind themselves to accept the highest or any Tender.

Sealed Tenders addressed to the Chairman of the Gas Committee, and endorsed "Tender for Spent Oxide," must be delivered at the offices of the Gas Department not later than 10 a.m. on Friday the 7th proximo

Forms of Tender and samples of the Oxide from bulk may be obtained on application to Mr. Charles Nickson, superintendent of the Gas Department.

By order,
WM. HENRY TALBOT,
Town Clerk.

Town Hall, Manchester,
24th July, 1896.

LEIGH URBAN DISTRICT COUNCIL.

THE Gas Committee of the Leigh Urban District Council invite TENDERS for the purchase of the Surplus TAR produced at their Gas Works, for a period of One Year from the 1st of September next.

All particulars, with form of tender, may be had from the undersigned.

Sealed tenders, endorsed "Tar," and addressed to the Chairman of the Gas Committee, to be delivered at the Town Hall, Leigh, on or before Monday, the 10th of August next.

The highest or any Tender not necessarily accepted.

ALFRED T. FLETCHER,
Engineer and Manager.

Gas Works, Leigh, Lancs.,
July 29th, 1896.

Miscellaneous.

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A thoroughly-experienced Works CHEMIST is disengaged. Accustomed to Management. Highest references.—Address "H." *Chemical Trade Journal* Office, Manchester.

A YOUNG ANALYST seeks position as Assistant in Public Laboratory. Would give services in exchange for small remuneration and opportunity of gaining additional experience. Good references.—Address "A. B.," *Chemical Trade Journal* Office, Manchester.

A YOUNG CHEMIST (26), with long and varied experience in Analytical work, and recently Analyst to a large dairy firm, seeks an Engagement as Analyst to some firm. Excellent testimonials. Moderate salary.—Address, "Analyst," *Chemical Trade Journal* Office, Manchester.

A YOUNG CHEMIST (23), desires Appointment as Assistant in Works or Public Laboratory; good Analyst, Assayer, and Bacteriologist; excellent references.—Address, "Assistant," *Chemical Trade Journal* Office, Manchester.

CHEMIST—Young Man seeks Situation as Assistant Chemist in Works; no objection to making himself generally useful. Good references. Small salary.—Address, "R.W.," *Chemical Trade Journal* Office, Manchester.

CHEMISTRY—Advertiser, 20, seeks Situation in Laboratory. Three years in Laboratory, Technical School, Manchester.—Address A. Fildes, Wardle Road, Sale, near Manchester.

GENTLEMAN (35), travelling for past 7 years for well known engineering firm, desires change. Any good line.—Address, "H.L.," *Chemical Trade Journal* Office, Manchester.

CHEMIST.—Wanted Competent Analytical Chemist; thorough Electrical knowledge essential.—Apply, with full particulars, "C. E. S.," *Chemical Trade Journal* Office, Manchester.

Miscellaneous.—Cont.

BOILERS, ENGINES, PUMPS, Cast and Wrought-iron TANKS, VACUUM and STEAM PANS, and every description of Second-hand PLANT and MACHINERY. Catalogues sent free on application.—Henry Roberts & Co., Engineers and Copper smiths Bancrof Road, Mile End, London, E.

JOHNSON'S FILTER PRESSES for SALE; several Second-hand, in first-class order Low prices to clear.—R. W. Andrews & Co., 24, Gray's Inn Road, London, W.C.

SALT or CHEMICALS—To be Let on long Lease, an Eligible SITE for SALT or CHEMICAL WORKS, in the Cheshire Salt District, with magnificent supply of natural Brine of highest strength.—Address in first instance, Davis Bros., 37, Blackfriars-street, Manchester.

SPENT OXIDE WANTED.—J. Hardman, Chemical Works, Milton, Staffs.

SULPHURIC ACID FOR SALE (B.O.V. & R.O.V. Made from Spent Oxide.—J. Hardman, Chemical Works, Milton, Staffs.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, London, E.

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TO BE SOLD, the LANCASHIRE MANURE COMPANY'S WORKS at Widnes with Machinery and 24,420 square yards of Freehold Land. Address J. Hosking, 16, Fenwick Street Liverpool.

£700 will buy Chemical Works, a few miles outside Manchester, with good Canal and Railway accommodation; also a large house attached, containing nine bedrooms, &c., &c., which could be used as residence or for offices, storerooms, &c. Also the following Plant included:—10 large Wooden Vats, Steam Boiler, Vertical Pump (Pearn's), Steam Engine, 2 large Phosphate Vats, Chemic Apparatus for making Bleaching Liquor; Pump for working same. Hoist, Grindstone, lot of Piping, Shafting, Stables, &c., &c. Mortgagee wishes to realise.—Apply Box 141 G.P.O., Manchester.

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"UP-TO-DATE" RECIPES, NEW INVENTIONS AND SPECIALITIES in Oils, Greases, Soaps, Paints, Varnishes, Enamels, Blackings Blues, Polishes, etc., etc., practical working recipes with latest improved English, Continental and American methods, Prize and Gold Medal brands, Cheapened Substitutes, Utilization of Wastes and Refuse, etc.; any samples matched. Write for Lists.—Lewis Jameson & Co. Balmoral-buildings, 91, Queen Victoria-street, London, E.C., and at 47, College-street, Islington, London, N.

FOR SALE.—One 3ft. dia. DISINTEGRATOR for grinding bones, chemicals, paints, etc.; One 4ft. dia. Disintegrator for grinding bones, chemicals, paints, and coal. One 9 x 5 Blake STONE BREAKER. One Ball MILL for cements, phosphates, etc. A large quantity of Elevator Chains and Buckets at very low prices.—Apply, C. E. Hall, 55, Norfolk-street, Sheffield.

AMMONIA, all qualities and strengths. Enquiries solicited. BROTHERTON & Co., Birmingham, Leeds, and Wakefield

Advertisements which arrive too late for insertion on this page will be found on first page of Matter (opposite Leading Article).

PHILIP HARRIS & CO., Ltd.,

MANUFACTURERS OF EVERY DESCRIPTION OF

Chemical, Physical, Surgical, Photographic Apparatus, etc., and Chemica

PURE ACIDS, A Speciality.

Illustrated Catalogues sent Post Free to Works' Managers upon application.

144 & 146, EDMUND STREET, BIRMINGHA

J. STIFF & SONS,

MANUFACTURERS OF

CHEMICAL APPARATUS

IN VITRIFIED STONEWARE.

ACID PANS, ACID PIPES & CONNECTIONS, RECEIVERS, CONDENSING WORMS, RETORTS, COCKS, JARS, BOTTLES & INSULATORS, BATTERY JARS, POROUS CELLS, &c., &c.

LAMBETH, LONDON, S.E.

Revolution in Stills

(MORRIS & WETHERED'S PATENT.)

WORKS by GAS, FIRE, or STEAM.

Requires no attention when once started, being Self-Feeding.

Does Six times as much work as the ordinary Still wh worked by Fire or Steam, in the small sizes.

Occupies only half the space of ordinary Still.

No Worm nor Vat required.

Prices and Full Particulars on Application to

LLEWELLINS & JAMES

Engineers, Coppersmiths, Brass and Bell Founders,

BRISTOL.

TUBES

IRON and STEEL (butt or lap welded), and FITTINGS for Gas, Water, Steam, Liquid Ammonia, and Hydraulic Work, galvanized white enamelled inside, or coated by Dr. Angus Smith's Composition. In stock to 8in. diameter.

COILS for heating, super-heating, distilling and refrigerating purposes, to 500 feet long without joints.

JOHN SPENCER,

Globe Tube Works, Wednesbury, and 18, Great St. Thomas Apostle, Cannon-st., London, E.C.

BRYAN CORCORAN, L

MILLSTONE BUILDE

WIRE WEAVER, MACHINE MANUFACT AND GENERAL MILL FURNISHER. Sole Maker of MILBURN'S Patent Conoidal Stone Grinding M

Especially suitable for certa materials, Wet or Dry.

Works and Warehouses:

Back Church Lane. *Parcel Deht.:* Basement of Corn Exchange

31, MARK LANE, LONDO

CANNINGTON, SHAW & CO., LIMITED,

CARBOYS.

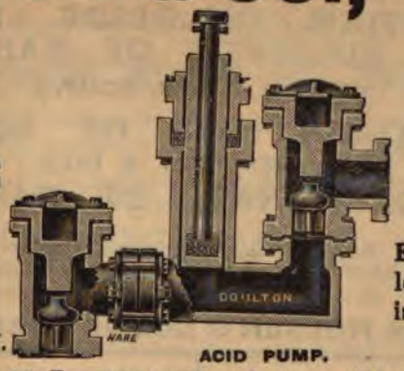
SHERDLEY GLASSWORKS, ST. HELENS.

Liverpool: Exchange Chambers
Glasgow: West Campbell-st.

OULTON & CO., LAMBETH, LONDON, S.E.

ANUFACTURERS OF
TONEWARE
HEMICAL
PARATUS
OF
Y DESCRIPTION.

RICE LISTS
APPLICATION.



ACID PUMP.

IMPROVED STONEWARE ACID PUMPS.

Each Pump prior to leaving the Factory is put into actual work and tested.

OWROOMS: 17, Deansgate, Manchester; 100, Soho St., Liverpool; Granville St., Birmingham; 38 and 40, Bothwell St., Glasgow; 6, Rue de Paradis, Paris.

LUMINOFERRIC.

ETER SPENCE & SONS,

Manchester Alum Works, MANCHESTER.

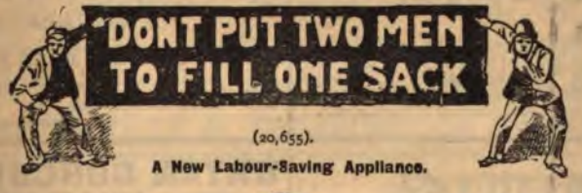
HARPER'S LIST

CESSORIES for the TRANSMISSION of , viz.:—BELT PULLEYS, ROPE PULLEYS, WHEELS, SHAFTING, COUPLINGS. TALS FIXINGS; appears on Pages 14 and first *Chemical Trade Journal* of each month.

SULPHURIC ACID.

JOHN NICHOLSON & SONS, LTD., Chemical Works, LEEDS, specially produce this ACID from SULPHUR, for making SULPHATE OF AMMONIA of high quality and *good* colour Delivered in our own Railway Tank-Wagons or Carboys. Highest references and all particulars supplied on application.

RTANT TO FARMERS, SEED, GRAIN & POTATO MERCHANTS.



(20,655).

A New Labour-Saving Appliance.

1 Sack Holder,
4, 6, and 8 Bushel Sacks.
5ft. 6in. by 2ft. 4in.
Weight, 49 lbs.
... ... £1 5s.

2 Sack Holder,
½, 1, and 2 Bushel Sacks.
4ft. 4in. by 2ft. 2in.
Weight, 42 lbs.
... ... £1 2s. 6d.
Carriage Paid.
Holders can be adjusted to any size of Sack.
DERS made in different sizes.

With this Machine one can do the work of two in filling Sacks. It is simple in construction, and not liable to get out of order; is easily managed, and adjustable to any kind of Sack. It is invaluable to Farmers, Seed, Grain and Potato Merchants, Oil and Colourmen, Druggists, and Chemical Manufacturers, and can be easily carried about with ease by a lad. The saving of actual labour in filling Sacks of any material will quickly cover the cost of the Machine.

Illustrated Price Lists on application.

Samples may be seen at the Office of this paper.

Central Plaster, Whiting, and Salt Depot,
J. M'DOWALL & Co., Brewer Street, Port Street, Manchester, February 8th, 1896.
Berkeley Street, Glasgow.
DEAR SIRS,—We have been using your Sack Holder for some time now, and we find them a great labour
Yours Respectfully, E. READ & SONS.
(A. E. READ.

Makers: J. M'DOWALL & CO., 230, Berkeley St., GLASGOW.

AGENTS WANTED

Tenders.

BOROUGH OF HEYWOOD.

THE Gas Committee invite Tenders for SPENT OXIDE and SULPHURIC ACID. Specifications and Forms of Tender may be obtained from Mr. Whatmough, Gas Manager.

Contractors tendering for this work must pay their workpeople at least the standard or trade union rate of wages, and observe the trade conditions which attach to the various kinds of work for which the Tender is sent in.

Sealed and endorsed Tenders to be sent to me not later than Tuesday, August 18th, 1896.

Municipal Buildings, Heywood, August 1st, 1896. By Order, A. B. PILLING, Town Clerk.

COUNTY BOROUGH OF WIGAN.

TO TAR DISTILLERS AND OTHERS.

THE Gas Committee of the Wigan Corporation invite Tenders for the SURPLUS TAR produced at their Gas Works for one year, commencing on the 1st of September next, and terminating on the 31st of August, 1897.

Particulars and Forms of Tender may be obtained on application to the undersigned.

The highest or any Tender not necessarily accepted.

Tenders, sealed and endorsed "Tar," to be delivered to J. J. Charnock, Esq., Town Clerk, on or before Tuesday, the 18th inst.

Boro' Gas Works, August 1st, 1896. Jos. TIMMINS, Engineer.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office are forwarded to Advertisers, post free.**

UNIVERSITY COLLEGE, BRISTOL.

CHEMICAL DEPARTMENT.

Professor—SYDNEY YOUNG, D.Sc., F.R.S.
Lecturer—FRANCIS E. FRANCIS, B.Sc., Ph.D.
Junior Demonstrator—E. HALFORD STRANGE, B.Sc.

THE Session 1896-97 begins on October 6th. Lectures on Inorganic, Organic and Advanced Chemistry will be delivered during the Session. The Laboratories are fitted with the most recent improvements for the study of Practical Chemistry in all its branches. In the Evening the Laboratory is opened and Lectures on Inorganic Chemistry, at reduced fees, are delivered. Several Scholarships are tenable at the College. CALENDAR, containing full information, price 1/- (by post 1/3) For prospectus and further particulars apply to JAMES RAFTER, Secretary.

CHEMIST.—Advertiser, 20, seeks Situation as Assistant in Laboratory at Print or Dye Works; three years at Technical School, Manchester.—Address A. Fildes, Wardle Road, Sale, Cheshire.

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Miscellaneous.—Cont.

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See Advertisement in first iss this month.

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SAMPLES AND PRICES ON APPLICATION.

Tenders.

COUNTY BOROUGH OF BIRKENHEAD.

TO OIL IMPORTERS AND DISTILLERS.

THE Corporation of Birkenhead are prepared to receive TENDERS for the Supply of about 1,500 Tons of Russian Solar Distillate Gas-Oil delivered free into their Oil Stores, at Ilchester Wharf, Birkenhead Docks, on or before 31st October, 1896, as the Gas Engineer may direct.

The Oil to have a specific gravity of not over ·875 at 60° F., with a minimum flash point of 200° F., and must be homogeneous, containing no residuum (pitch or masute). The Corporation are also willing to consider offers of other Gas-Oils, if the quality and grade and full particulars are given.

Samples of the Oils tendered for must be sent to the Gas Engineer, at the Gas Works, and properly labelled with the name of the firm, and the number and name of the Oil corresponding to the Tender.

Any further information may be obtained from the Gas Engineer, Mr. T. O. Paterson, M.I.C.E., Gas Works, Thomas-street, Birkenhead.

Tenders, stating price per ton sealed and endorsed "Tender for Gas-Oil," to be sent in to me not later than Five o'clock in the afternoon of Friday, 28th August, 1896.

The Corporation do not bind themselves to accept the lowest or any tender.

By Order,

Town Hall, Birkenhead, 12th August, 1896. ALFRED GILL, Town Clerk.

BOROUGH OF HEYWOOD.

THE Gas Committee invite Tenders for SPENT OXIDE and SULPHURIC ACID. Specifications and Forms of Tender may be obtained from Mr. Whatmough, Gas Manager.

Contractors tendering for this work must pay their workpeople at least the standard or trade union rate of wages, and observe the trade conditions which attach to the various kinds of work for which the Tender is sent in.

Sealed and endorsed Tenders to be sent to me not later than Tuesday, August 18th, 1896.

By Order,

Municipal Buildings, Heywood, August 1st, 1896. A. B. PILLING, Town Clerk.

COUNTY BOROUGH OF WIGAN.

TO TAR DISTILLERS AND OTHERS.

THE Gas Committee of the Wigan Corporation invite Tenders for the SURPLUS TAR produced at their Gas Works for one year, commencing on the 1st of September next, and terminating on the 31st of August, 1897.

Particulars and Forms of Tender may be obtained on application to the undersigned.

The highest or any Tender not necessarily accepted.

Tenders, sealed and endorsed "Tar," to be delivered to J. J. Charnock, Esq., Town Clerk, on or before Tuesday, the 18th inst.

JOS. TIMMINS, Engineer.

Boro' Gas Works, August 1st, 1896.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office are forwarded to Advertisers, post free.**

IN the High Court of Justice in Ireland. Chancery Division. Master of the Rolls.—Notice and Advertisement of Writ of Summons. Issued in Actions against Incorporate Body, Railway Company Poor Law Guardians, &c.

THOMAS GEORGE WEBB, Plaintiff.
Messrs. KYNOCH & COMPANY, LTD., Defendants.

NOTICE IS HEREBY GIVEN, pursuant to the provisions of the Act 16 and 17 Victoria, Chap. 113, Sec. 33, that a WRIT OF SUMMONS has been Issued at the suit of the said Thomas George Webb, of 7, Market-street, Manchester, Patentee, against Messrs. KYNOCH & COMPANY LTD., of Arklow, in the county of Wicklow, Cordite Manufacturers having their head office at Lion Works, Witton, near Birmingham, in the Chancery Division of her Majesty's High Court of Justice in Ireland. Dated this 6th day of August, 1896.

MILWARD, JONES, & CAMERON, Solicitors for the said Plaintiff, 6, Dawson-street, Dublin.

To the said Messrs. Kynoch & Co., Limited, and all whom it may concern.

AGENTS Wanted to sell Nitrate of Ammonia, Collodion Cotton and Nitric Acid, 36/48° Bé.—Address "A. W. S.," *Chemical Trade Journal* Office, Manchester.

Miscellaneous.—Cont.

AN Englishman, resident in France twenty years, with first-class business qualifications, wishes to negotiate Agencies for sale of Chemicals, Manure, etc. in France.—Address, Davies, 18, Rue la Fontaine, Paris.

CHEMIST, B.Sc., F.I.C., wants Engagement. Large experience in Coal Carbonizing, Ammonias, Tar Products, etc.; has had Charge of Works. Rapid accurate Analyst.—Apply to "F.I.C.," *Chemical Trade Journal* Office, Manchester.

MANURE or Chemical Trade—Gentleman of experience open for Appointment to develop and extend a Business, or as Traveller. Soon disengaged.—Address "Azote," care of Deacon & Co., Leadenhall-street, London, E.C.

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SAMPLES AND PRICES ON APPLICATION.

Tenders.

TAR AND LIQUOR.

THE Eccleshill and Bolton Gas Company invite TENDERS for the Surplus TAR and AMMONIACAL LIQUOR to be produced at their Works, together or separately, for twelve months, from 1st September next. Can be delivered in contractor's tanks, at the station (G.N.R.) Coal carbonized per annum, about 2,000 tons.

Tenders, sealed and endorsed, must reach me not later than Monday morning, 7th September.

Eccleshill, nr. Bradford. J. MELLOR, Secretary.

RADCLIFFE & PILKINGTON GAS COMPANY.

TO TAR DISTILLERS.

THE Directors of this Company invite TENDERS for the purchase of 700 tons of the surplus TAR, to be produced at their Works in Radcliffe during the Twelve Months commencing the 1st day of October next.

Particulars may be obtained from the undersigned, to whom endorsed Tenders must be delivered not later than Tuesday, the 1st day of September next.

JAMES BRADDOCK, Manager and Secretary.

Gas-Works, Radcliffe, Aug. 20, 1896.

Sale by Auction.

IMPORTANT TO SUGAR REFINERS.

MESSRS. FULLER, HORSEY, SONS, & CASSELL beg to announce that they will offer for SALE BY AUCTION in October next, under an order of the High Court of Justice, Chancery Division, that highly valuable Freehold Property known as CLYDE WHARF SUGAR REFINERY, Victoria Docks, Silvertown, for many years in the occupation of Messrs. David Martineau and Sons, Limited, and formerly known as Duncan's Sugar Refinery.

The premises have an extensive river frontage, a siding to the Great Eastern Railway, and occupy an area of about seven acres, the greater part of which is covered with substantial buildings.

The plant and machinery, which include no less than 10 vacuum pans, is equal to an output on 1,800 tons per week, and the works are also provided with engineers' tools for repairing, and ample engine and boiler power. The refinery, with the fixed machinery, will be first offered on the premises in one lot as a whole, and, in the event of no satisfactory bid being obtained, the dismantlement of the works will immediately be proceeded with, and the plant and machinery offered in lots in detail. Particulars, with plans are in course of preparation, and, when ready, may be had of Messrs. Golding and Hargrove, Solicitors, 99, Cannon-street, E.C.; of Messrs. C. Fitch Kemp, Ferd, and Co, Chartered Accountants, 73, Lombard-street, E.C.; and of the Auctioneers 11, Billiter-square, E.C.

Miscellaneous.

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MILWARD, JONES, & CAMERON,
Solicitors for the said Plaintiff,
6, Dawson-street, Dublin.

To the said Messrs. Kynoch & Co., Limited, and all whom it may concern.

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ANALYTICAL CHEMIST, age 17, desires Situation in Manufacturer's Laboratory. Five years' experience in Inorganic and Organic Quantitative and Qualitative Analysis. Six months trial if required.—H. Hewitt, Fern Bank, Hyde, near Manchester.

Miscellaneous.—Cont.

CHEMICAL WORKS.—Partnership or Interest Wanted by Gentleman with some Business experience, Chemical knowledge, and good Analyst, in Professional, Manufacturing, or Wholesale Business.—Address, "Works," *Chemical Trade Journal* Office, Manchester.

PHARMACEUTICAL CHEMIST, with knowledge of Analysis and Preparation of Fine Chemicals, required for Chemical Works abroad in 1897. State qualifications and experience, and salary required, to "F. I. C.," care of G. H. Wilson & Sons, 6, Fenchurch Buildings, London, E.C.

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FOR SALE.—Cast-Iron Tank, 31ft. 6in. diam. by 18 to 20 deep, built in segments, with cast-iron bottom; very suitable for tar or other holder. —Apply, Thos. W. Ward, Sheffield.

FOR SALE—Second-hand Ammonia Still, with Heater and Steam-Reducing Valve, 2ft. diameter. A bargain. Davis' Patent. (Taken out to be replaced by larger size, same maker.) - Apply to William Drewry, Gas Works, Gt. Grimsby.

SALT or CHEMICALS—To be Let on long Lease, an Eligible SITE for SALT or CHEMICAL WORKS, in the Cheshire Salt District, with magnificent supply of natural Brine of highest strength.—Address in first instance, Davis Bros., 32, Blackfriars-street, Manchester.

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SULPHURIC ACID FOR SALE (B.O.V. & R.O.V.) Made from Spent Oxide.—J. Hardman, Chemical Works, Milton, Staffs.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, London, E.

IT IS WORTH YOUR WHILE TO BUY DIRECT. THE RELIANCE LUBRICATING OIL COMPANY SUPPLY, ON APPROVAL, HIGH-CLASS HYDRO-CARBON NON-CORROSIVE LUBRICANTS, which, through the superiority, have the largest sale in the world. Engine, Cylinder, and Machinery Oils, 11½d.; Spindle Oil, 9½d.; Loom Oil, 10½d.; Extra Special Cylinder Oil, 1s. 4d.; Extra Special Engine Oil, 1s. 4d.; Gas Engine and Dynamo Oils, 1s. 6d. per gallon; Light Machine Oil, 10½d.; barrels free and carriage paid.—**Reliance Lubricating Oil Co.**, 19 and 22, Water Lane, Great Tower Hill, **London**, E.C. Depôts at Liverpool, Bristol, Hull, Cardiff, and Glasgow. Telegrams: "Subastral, London."

TO BE SOLD, the LANCASHIRE MANURE COMPANY'S WORKS at Widnes with Machinery and 24,420 square yards of Freehold Land. Address J. Hosking, 16, Fenwick Street Liverpool.

£700 will buy Chemical Works, a few miles outside Manchester, with good Canal and Railway accommodation; also a large house attached, containing nine bedrooms, &c., &c., which could be used as residence or for offices, storerooms, &c. Also the following Plant included:—10 large Wooden Vats, Steam Boiler, Vertical Pump (Pearn's), Steam Engine, 2 large Phosphate Vats, Chemic Apparatus for making Bleaching Liquor; Pump for working same. Hoist, Grindstone, lot of Piping, Shafting, Stables, &c., &c. Mortgagee wishes to realise.—Apply Box 141 G.P.O., Manchester.

PLATINUM Utensils, Scrap, Lamp Ends, etc. Best Prices given by Derby and Co. 44, Clerkenwell Road, London, E.C. N.B.—Platinum Sold

"UP-TO-DATE" RECIPES, NEW INVENTIONS AND SPECIALITIES in Oils, Greases, Soaps, Paints, Varnishes, Enamels, Blackings, Blues, Polishes, etc., etc., practical working recipes with latest improved English, Continental and American methods, Prize and Gold Medal brands, Cheapened Substitutes, Utilisation of Wastes and Refuse, etc.; any samples matched. Write for Lists.—Lewis Jameson & Co. Balmoral buildings, 91, Queen Victoria-street, London, E.C., and at 47, College-street, Islington, London, N.

PHILIP HARRIS & CO., Ltd.,

MANUFACTURERS OF EVERY DESCRIPTION OF

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PURE ACIDS, A Speciality.

New Illustrated Catalogue just issued, 2,000 Illustrations, 300 pages. New Form Apparatus for Gas Analysis.

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WORKS by GAS, FIRE, or STEAM.

Requires no attention when once started, being Self-Feeding.

Does Six times as much work as the ordinary Still whe worked by Fire or Steam, in the small sizes.

Occupies only half the space of ordinary Still.

No Worm nor Vat required.

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TUBES

IRON and STEEL (butt or lap welded), and FITTINGS for Gas, Water, Steam, Liquid Ammonia, and Hydraulic Work, galvanized white enamelled inside, or coated by Dr. Angus Smith's Composition. In stock to 8in. diameter.

COILS for heating, super-heating, distilling and refrigerating purposes, to 500 feet long without joints.

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WIRE WEAVER, MACHINE MANUFACTU AND GENERAL MILL FURNISHER, Sole Maker of MILBURN'S Patent Conoidal Stone Grinding M Especially suitable for sarta materials, Wet or Dry.

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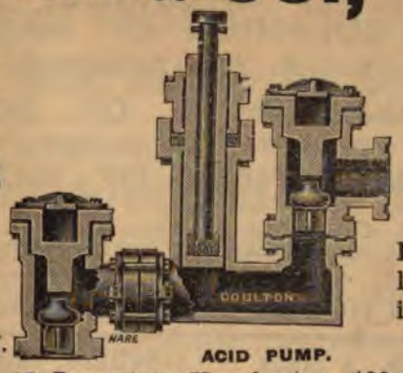

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IMPROVED STONEWARE ACID PUMPS.

Each Pump prior to leaving the Factory is put into actual work and tested.

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ETER SPENCE & SONS,

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ESSORIES for the TRANSMISSION of viz.:—BELT PULLEYS, ROPE PULLEYS, VHEELS, SHAFTING, COUPLINGS, LS FIXINGS; appears on Pages 14 and st *Chemical Trade Journal* of each month.

SULPHURIC ACID.

JOHN NICHOLSON & SONS, LTD., Chemical Works, LEEDS, specially produce this ACID from SULPHUR, for making SULPHATE OF AMMONIA of high quality and *good* colour, Delivered in our own Railway Tank-Wagons or Carboys. Highest references and all particulars supplied on application.

RTANT TO FARMERS, SEED, GRAIN & POTATO MERCHANTS.

(20,655).

A New Labour-Saving Appliance.

1 Sack Holder,
4, 6, and 8 Bushel Sacks.
3ft. 6in. by 2ft. 4in.
Weight, 49 lbs.
... ... £1 5s.

2 Sack Holder,
½, 1, and 2 Bushel Sacks.
4ft. 4in. by 2ft. 2in.
Weight, 42 lbs.
... ... £1 2s. 6d.
Carriage Paid.
Holders can be adjusted to any size of Sack.
DERS made in different sizes.

With this Machine one can do the work of two in filling Sacks. It is simple in construction, and not liable to get out of order; is easily managed, and adjustable to any kind of Sack. It is invaluable to Farmers, Seed, Grain and Potato Merchants, Oil and Colourmen, Druggists, and Chemical Manufacturers, and can be easily carried about with ease by a lad. The saving of actual labour in filling Sacks of any material will quickly cover the cost of the Machine.

Illustrated Price Lists on application.

Samples may be seen at the Office this paper.

Central Plaster, Whiting, and Salt Depot,
Brewer Street, Port Street, Manchester, February 8th, 1896.

. M'DOWALL & Co.,
Berkeley Street, Glasgow.

DEAR SIRS,—We have been using your Sack Holder for some time now, and we find them a great labour

Yours Respectfully,
E. READ & SONS.
(A. E. READ.

Makers: J. M'DOWALL & CO., 230, Berkeley St., GLASGOW.

AGENTS WANTED.

Tender.

TO MANUFACTURING CHEMISTS.

THE London County Council is prepared to receive Tenders for the Supply and Delivery at the Barking and Crossness Outfall Works, of 5,250 tons of PROTO-SULPHATE OF IRON (Commercial Green Vitriol.)

Persons desiring to submit Tenders may obtain the Form of Tender, and other particulars, at the Engineer's Department, County Hall, Spring Gardens, S.W. Tenders must be upon the official forms and the printed instructions contained therein must be strictly complied with. The contractors will be bound by the contract to pay to all workmen (except a reasonable number of legally bound apprentices), employed by them wages at rates not less and to observe hours of labour not greater than the rates and hours set out in the Council's list, and such rates of wages and hours of labour will be inserted in and form part of the contract by way of schedule.

Tenders are to be delivered at the County Hall in a sealed cover addressed to the Clerk of the London County Council, and marked "Tender for Proto-Sulphate of Iron."

No Tender will be received after 10 a.m. on Tuesday, the 6th October, 1896. Any Tender which does not comply with the printed instructions for Tender may be rejected.

The Council does not bind itself to accept the lowest or any Tender, and it will not accept the Tender of any person or firm who shall on any previous occasion have withdrawn a Tender after the same has been opened unless the reasons for the withdrawal were satisfactory to the Council.

Spring Gardens, S.W.
2nd Sept., 1896.

C. J. STEWART,
Clerk of the Council.

Sale by Auction.

IMPORTANT TO SUGAR REFINERS.

MESSRS. FULLER, HORSEY, SONS, & CASSELL beg to announce that they will offer for SALE BY AUCTION in October next, under an order of the High Court of Justice, Chancery Division, that highly valuable Freehold Property known as CLYDE WHARF SUGAR REFINERY, Victoria Docks, Silvertown, for many years in the occupation of Messrs. David Martineau and Sons, Limited, and formerly known as Duncan's Sugar Refinery.

The premises have an extensive river frontage, a siding to the Great Eastern Railway, and occupy an area of about seven acres, the greater part of which is covered with substantial buildings.

The plant and machinery, which include no less than 10 vacuum pans, is equal to an output on 1,800 tons per week, and the works are also provided with engineers' tools for repairing, and ample engine and boiler power. The refinery, with the fixed machinery, will be first offered on the premises in one lot as a whole, and, in the event of no satisfactory bid being obtained, the dismantlement of the works will immediately be proceeded with, and the plant and machinery offered in lots in detail. Particulars, with plans, are in course of preparation, and, when ready, may be had of Messrs. Golding and Hargrove, Solicitors, 99, Cannon-street, E.C.; of Messrs. C. Fitch Kemp, Ford, and Co., Chartered Accountants, 73, Lombard-street, E.C.; and of the Auctioneers, 11, Billiter-square, E.C.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office are forwarded to Advertisers, post free.**

IN the High Court of Justice in Ireland. Chancery Division. Master of the Rolls.—Notice and Advertisement of Writ of Summons. Issued in Actions against Incorporate Body, Railway Company Poor Law Guardians, &c.

THOMAS GEORGE WEBB, Plaintiff.
Messrs. KYNOCH & COMPANY, LTD., Defendants.

NOTICE IS HEREBY GIVEN, pursuant to the provisions of the Act 16 and 17 Victoria, Chap. 113, Sec. 33, that a WRIT OF SUMMONS has been Issued at the suit of the said Thomas George Webb, of 7, Market-street, Manchester, Patentee, against Messrs. KYNOCH & COMPANY, LTD., of Arklow, in the county of Wicklow, Cordite Manufacturers having their head office at Lion Works, Witton, near Birmingham, in the Chancery Division of her Majesty's High Court of Justice in Ireland. Dated this 6th day of August, 1896.

MILWARD, JONES, & CAMERON,
Solicitors for the said Plaintiff,
6, Dawson-street, Dublin.

To the said Messrs. Kynoch & Co., Limited, and all whom it may concern.

UNIVERSITY COLLEGE, BRISTOL.
CHEMICAL DEPARTMENT.
Professor—SYDNEY YOUNG, D.Sc., F.R.S.
Lecturer—FRANCIS E. FRANCIS, B.Sc., Ph.D.
Junior Demonstrator—E. HALFORD STRANGE, B.Sc.

THE Session 1896-97 begins on October 6th. Lectures on Inorganic, Organic and Advanced Chemistry will be delivered during the Session. The Laboratories are fitted with the most recent improvements for the study of Practical Chemistry in all its branches. In the Evening the Laboratory is opened and Lectures on Inorganic Chemistry, at reduced fees, are delivered. Several Scholarships are tenable at the College. CALENDAR, containing full information, price 1/- (by post 1/3). For prospectus and further particulars apply to JAMES RAFTER, Secretary.

Miscellaneous.—Cont.

AN Experienced Works Chemist and Engineer is disengaged; well up in Electricity; erection of plant, and control. Address—"C. B.," *Chemical Trade Journal* Office, Manchester.

ADVERTISER, 22, seeks Re-engagement as Laboratory Assistant in College, Institute, or Chemical Works. Six years experience. First-class references.—Address, "F.," 5, Lulworth-road, Peckham, London, S E.

CHEMIST and Engineer is open to Engagement with Manufacturing Chemist or in Chemical Works; or with view to Partnership. Could introduce several Specialities. Address, "Alpha," *Chemical Trade Journal* Office, Manchester.

CHEMICAL WORKS.—Partnership or Interest Wanted by Gentleman with some Business experience. Chemical knowledge, and good Analyst, in Professional, Manufacturing, or Wholesale Business.—Address, "Works," *Chemical Trade Journal* Office, Manchester.

YOUNG CHEMIST desires situation in Laboratory of Chemical Works. Six years' experience at a Chemical Works in London; has knowledge of the working of Chambers. Address—J. J., *Chemical Trade Journal* Office, Manchester.

MANAGER WANTED, for large and important Chemical Works. A practical and energetic man, with high scientific attainments, and possessing very superior administrative and executive ability. The position commands a liberal salary. Address, with full particulars of age, qualifications, experience, and salary, to H.R.T., care of Street and Co., 30, Cornhill, E.C. All communications will be treated in strict confidence.

NITRIC ACID—CAUSTIC SODA. The Chemical and Electrolytic Syndicate, Limited having completed the Demonstration of their Nitric Acid—Caustic Soda Process, are prepared to grant Licenses to work the same.—Apply to the offices of the Company, 6, Clement's-lane, London, E.C.

BOILERS, ENGINES, PUMPS, Cast and Wrought-iron TANKS, VACUUM and STEAM PANS, and every description of Second-hand PLANT and MACHINERY. Catalogues sent free on application.—Henry Roberts & Co., Engineers and Copper smiths, Bancroft Road, Mile End, London, E.

JOHNSON'S FILTER PRESSES for SALE; several Second-hand, in first-class order Low prices to clear.—R. W. Andrews & Co., 24, Gray's Inn Road, London, W.C.

FOR SALE.—Cast-Iron Tank, 31ft. 6in. diam. by 18 to 27 deep, built in segments, with cast iron bottom; very suitable for tar or other holder. —Apply, Thos. W. Ward, Sheffield.

FOR SALE—Second-hand Ammonia Still, with Heater and Steam-Reducing Valve, 26t. diameter. A bargain. Davis' Patent. [Taken out to be replaced by larger size, same maker.]—Apply to William Drewry, Gas Works, Gt. Grimsby.

SALT or CHEMICALS—To be Let on long Lease, an Eligible SITE for SALT or CHEMICAL WORKS, in the Cheshire Salt District, with magnificent supply of natural Brine of highest strength.—Address in first instance, Davis Bros., 31, Blackfriars-street, Manchester.

TWELVE STONEWARE RECEIVERS, 20 gallons for Sale at Half Cost Price. Apply, Cross, 606, Old Ford Road, Bow, London E

SPENT OXIDE WANTED.—J. Hardman, Chemical Works, Milton, Staffs.

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WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, London, E.

BLAYDON MANURE AND ALKALI COMP.'S

PURE WHITE SULPHATE OF ALUM
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PURE PRECIP. CARBONATE OF BARYTES

Also Hydrate and Anhydrous Alumina, Chloride and Carbon Alumina, Aluminate of Soda, Hydrate of Barium, &c.

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ALL SIZES OF CARBOYS KEPT & KINDS & HAMPERS IN STOCK.

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Size Manufacturers.
Works: SMETHWICK, BIRMINGHAM.
Northern Office: 224, Effingham Road, Sheffield.

Manlove, Alliott & Co. Ld.,
ENGINEERS,
NOTTINGHAM.
See Advertisement in first issue of this month.

TUBES
IRON and STEEL (butt or lap welded), and FITTINGS for Gas, Water, Steam, Liquid Ammonia, and Hydraulic Work, galvanised white enamelled inside, or coated by Dr. Angus Smith's Composition. In stock to 8in. diameter.
COILS for heating, super-heating, distilling and refrigerating purposes, to 300 feet long without joints.
JOHN SPENCER,
Globe Tube Works, Wednesbury, and 14, Great St. Thomas Apostle, Cannon-st., London, E.C.

ALBUMENS, Pastes, Arabic S
Vegetable and Animal Size.
GLUES, PREPARED PITHS,
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Greases, Manure Materials
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In any form Pu for Cash.
Highest prices allow
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Especially suitable for materials, Wet or
Works and Warehou
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CANNINGTON, SHAW & CO., LIMITED,
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CARBOYS.
SHERDLEY GLASSWORKS, ST. HELENS

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WALKERS' PATENT

IR COMPRESSING ENGINES.

AS COMPRESSING ENGINES.

150,000 I.H.P. ALREADY AT WORK.

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XHAUST AND BLAST FANS.

SPENCE'S ALUM.

PETER SPENCE & SONS,

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R. W. GREEFF & CO.,

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IMPORTERS OF

PUREST SULPHATE OF ALUMINA.

UORIDE OF CHROME (Patented). ANTIMONY SALTS.

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NC OXIDE, OXALIC, ACETIC, TANNIC, & SALICYLIC

ACIDS, NITRATE & CHLORIDE OF BARIUM, &c.

ECIALITIES:—

ODA ASH 58% Phosphoric Acid Castor Oil Amidol, Metol, Glycin,
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ALTCAKE Oxalic Acid Essent. Oils Photographicals,
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ITHIA SALTS Salicylic Acid Grape Sugar Dry Plates,
ORAX Carbolic Acid Cane Syrup &c., &c.
MERCURIALS Camphor Treacle
UL. COPPER Stearine Nitrate of Silver
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METALS
MINERALS
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Telegrams— "FUERST, LONDON."

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HEADQUARTERS FOR ALL HEAVY OR FINE CHEMICALS,

Pharmaceutical Products,

Photographic Developers,

Drysalteries and Drugs,

Also OILS and PRODUCE.

SAMPLES AND PRICES ON APPLICATION.

CORRESPONDENCE SOLICITED.

Tender.

TO TAR DISTILLERS, &c.

THE Kidderminster Gas Light and Coke Co. invite TENDERS for the purchase of the Surplus TAR to be produced at their works and loaded into contractors' boats, during 12 months commencing 1st November next.

Tenders to be sent in not later than Friday, 25th inst.

Gas Works, Kidderminster,
Sept. 7, 1896.

Sales by Auction.

TO BE SOLD, pursuant to an order of the High Court of Justice (Chancery Division), Hodgson v. Martineau, 1895 H. 52, and Industrial and General Trust (Limited) v. Martineau, 1895, I. 17. with the approbation of Mr. Justice North, to whom these actions are attached.

IMPORTANT FREEHOLD SUGAR REFINERY, situate on the Thames adjoining the Victoria Docks, with siding to the Great Eastern Railway, fitted with modern Plant and Machinery, equal to an output of 1,800 tons of sugar per week. With possession—Mr. F. J. Terry Horsey, of the firm of

MESSRS. FULLER, HORSEY, SONS & CASSELL, will SELL BY AUCTION, on the Premises, on Tuesday, October 6th, at Twelve o'clock precisely (unless previously sold by private contract), the VALUABLE and EXTENSIVE FREEHOLD PROPERTY known as Clyde Wharf Sugar Refinery, in the occupation of Messrs. David Martineau and Sons (Limited). The premises have a frontage to the river Thames of about 300 feet, and a ground area of about seven acres.

The buildings are most substantially erected, and comprise: The new sugar house, 77ft. by 71ft., of fireproof construction throughout; the second sugar house, 110ft. by 62ft., of 8 floors; range of warehouses, 122ft by 103ft., of 3 floors; bonded warehouse, 125ft. by 85ft., of 6 floors; cube sugar cutting and cooling houses; two charcoal reburning houses; cube sugar warehouse, 150ft. by 52ft.; saccharum house, 62ft. by 52ft.; general stores, 110ft. by 52ft., of 4 floors; engineers', smiths', plumbers', coopers', and carpenters' shops; three boiler houses; five chimney shafts; hydraulic and other engine houses; well house, with artesian well, affording an abundant supply of water; gas works; stabling, offices, laboratory, dwelling-house, cottages, and other buildings. The whole of the costly fixed plant, machinery, and fixtures will be included in the purchase.

In the event of the Freehold Refinery, with fixed plant, being sold in one lot, the loose plant, tools, and utensils will immediately be offered piecemeal, but if no satisfactory bid for the property as a whole be made the Freehold Land and Buildings, which are available for a brewery, bonded warehouses, or other large business undertaking, will then be submitted for sale separate from the fixed plant and machinery, and afterwards the whole of the plant and machinery, tools and utensils, both fixed and loose, in lots in detail as per catalogue.

May be viewed by orders, and particulars, plans, and conditions of sale, obtained of Messrs. Golding and Hargrove, solicitors, 99, Cannon-street, E.C; C. Fitch Kemp, Esq. 73, Lombard-street, E.C.; and of the Auctioneers, 11, Billiter-square, E.C.

TO SUGAR REFINERS, ENGINEERS, AND OTHERS.

Mr. F. J. Terry Horsey, of the firm of

MESSRS. FULLER, HORSEY, SONS & CASSELL, will SELL BY AUCTION, in Lots, on the Premises, Clyde Wharf, Victoria Docks, Canning Town, on Tuesday October 6th, at Twelve precisely (unless previously sold as a whole), PLANT and MACHINERY, including seven copper and three cast iron vacuum pans, up to 11ft. 6in. diameter, 11 ft. deep, with copperworms and condensers, &c.; five horizontal and three vertical vacuum pumps, six crystallising cylinders, two superheaters, two copper and five cast iron cooling pans, two Hersey's granulators, two cube sugar drying stoves, eight ditto cutting machines, and four punching machines; cube moulds, washing machine, copper and iron mixers; seven Johnson's filter presses, 42 cast iron bag filters, single, double, and three-throw syrup and liquor pumps, four Worthington pumps, and steam pumps various; 44 centrifugal machines, up to 72in.; one copper and 10 cast iron blowing-up cisterns, 12 wrought iron sugar cleansing tanks, numerous liquor, syrup, treacle, condense water, and other tanks, 48 charcoal cisterns, 19 charcoal re-burning kilns, hydraulic lifts and presses, conveyors and elevators; two liquor distributors, patent water heater, saccharum vats, five screw cutting and other lathes, shaping machine, three drilling and two screwing machines, 5cwt. steam hammer, circular saw bench, overhead traveller, a bag printing machine, hydraulic coal crane with conveyor and steam engine; two weighbridges, Carter's disintegrator; horizontal expansive engine by Marshall, 20in. cylinder, 3ft. stroke; pair of horizontal engines by Moreland, 18in. cylinders, 2ft. stroke; two pairs hydraulic pumping engines; 21 horizontal and vertical engines various, by Tangyes, Duncan, Stewart & Co., and other makers; two beam and three

(Continued on page 6.)

Sales by Auction.—Cont.

(*Continued from page 5.*)

pairs diagonal engines, 19 Lancashire and four Cornish boilers, with Vicars' mechanical stokers, two Cator and Walker's boilers, five boiler feed pumps, water softening apparatus, shafting and gearing, copper, lead, and iron piping, with metal cocks and valves, two castiron montejers, weighing machines, mortar mill, blocks and falls, 60 tons floor plates, quantity sugar moulds, new sugar bags, sugar bogeys, loose tools and utensils, a large assortment of general stores, office furniture, and numerous other effects.

May be viewed, and catalogues had as in preceding advertisement.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office are forwarded to Advertisers, post free.**

AN Experienced Works Chemist and Engineer is disengaged; well up in Electricity; erection of plant, and control. Address—"C. B.," *Chemical Trade Journal* Office, Manchester.

ANALYTICAL CHEMIST, age 18, desires Situation in Manufacturer's Laboratory. Five years' experience in Inorganic and Organic Quantitative and Qualitative Analysis. Six months trial if required. —H. Hewitt, Fern Bank, Hyde, near Manchester.

CHEMIST and Engineer is open to Engagement with Manufacturing Chemist or in Chemical Works; or with view to Partnership. Could introduce several Specialities.—Address, "Alpha," *Chemical Trade Journal* Office, Manchester.

CHEMICAL WORKS.—Partnership or Interest Wanted by Gentleman with some Business experience, Chemical knowledge, and good Analyst, in Professional, Manufacturing, or Wholesale Business.—Address, "Works," *Chemical Trade Journal* Office, Manchester.

TECHNICAL Chemist, who has been many years in charge of Chemical and Metallurgical Works, desires suitable position. Advertiser has a thorough scientific education, also experience in the erection of plant and management of men.—Address "M. N.," *Chemical Trade Journal* Office, Manchester.

NITRIC ACID—CAUSTIC SODA. The Chemical and Electrolytic Syndicate, Limited having completed the Demonstration of their Nitric Acid—Caustic Soda Process, are prepared to grant Licenses to work the same.—Apply to the offices of the Company, 6, Clement's-lane, London, E.C.

BOILERS, ENGINES, PUMPS, Cast and Wrought-iron TANKS, VACUUM and STEAM PANS, and every description of Second-hand PLANT and MACHINERY. Catalogues sent free on application.—Henry Roberts & Co., Engineers and Copper smiths Bancroft Road, Mile End, London, E.

CHARCOAL for Sale, best quality.—J. Hughes and Son, Whitecroft Chemical Works, Parkend, Glos.

JOHNSON'S FILTER PRESSES for SALE; several Second-hand, in first-class order Low prices to clear.—R. W. Andrews & Co., 24, Gray's Inn Road, London, W.C.

FOR SALE, cheap, 3,000 one and two gallon CANS, in good condition. Have held oak varnish.—Apply Wm. Skelton and Co., Hay Mills, Birmingham.

SALT or CHEMICALS—To be Let on long Lease, an Eligible SITE for SALT or CHEMICAL WORKS, in the Cheshire Salt District, with magnificent supply of natural Brine of highest strength.—Address in first instance, Davis Bros., 31, Blackfriars-street, Manchester.

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PHILIP HARRIS & CO., Ltd

MANUFACTURERS OF EVERY DESCRIPTION OF

Chemical, Physical, Surgical. Photographic Apparatus, etc., and Chem

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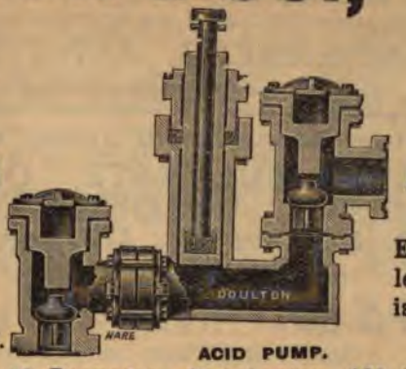

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Tenders to be sent in not later than Friday, 25th inst.

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(Signed) JOHN CHEW,
Gas Engineer.

Gas Office, Blackpool, September 12th, 1896.

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TO BE SOLD, pursuant to an order of the High Court of Justice (Chancery Division), Hodgson v. Martineau, 1895. H. 52, and Industrial and General Trust (Limited) v. Martineau, 1895, I. 17, with the approbation of Mr. Justice North, to whom these actions are attached.

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In the event of the Freehold Refinery, with fixed plant, being sold in one lot, the loose plant, tools, and utensils will immediately be offered piecemeal, but if no satisfactory bid for the property as a whole be made, the Freehold Land and Buildings, which are available for a brewery, bonded warehouses, or other large business undertaking, will then be submitted for sale separate from the fixed plant and machinery, and afterwards the whole of the plant and machinery, tools and utensils, both fixed and loose, in lots in detail as per catalogue.

May be viewed by orders, and particulars, plans, and conditions of sale, obtained of Messrs. Golding and Hargrove, solicitors, 99, Cannon-street, E.C.; C. Fitch Kemp, Esq., 73, Lombard-street, E.C.; and of the Auctioneers, 11, Billiter-square, E.C.

TO SUGAR REFINERS, ENGINEERS, AND OTHERS.

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(*Continued on page 6.*)

Sales by Auction.—Cont.

(*Continued from page 5.*)

sugar cleansing tanks, numerous liquor, syrup, treacle, condense water, and other tanks, 48 charcoal cisterns, 19 charcoal re-burning kilns, hydraulic lifts and presses, conveyors and elevators; two liquor distributors, patent water heater, saccharum vats, five screw cutting and other lathes, shaping machine, three drilling and two screwing machines, 5cwt. steam hammer, circular saw bench, overhead traveller, a bag printing machine, hydraulic coal crane, with conveyor and steam engine; two weigh-bridges, Carter's disintegrator; horizontal expansive engine by Marshall, 20in. cylinder, 3ft. stroke; pair of horizontal engines by Moreland, 18in. cylinders, 2ft. stroke; two pairs hydraulic pumping engines; 21 horizontal and vertical engines various, by Tangyes, Duncan, Stewart & Co., and other makers; two beam and three pairs diagonal engines, 19 Lancashire and four Cornish boilers, with Vicars' mechanical stokers, two Cator and Walker's boilers, five boiler feed pumps, water softening apparatus, shafting and gearing, copper, lead, and iron piping, with metal cocks and valves, two castiron montejers, weighing machines, mortar mill, blocks and falls, 60 tons floor plates, quantity sugar moulds, new sugar bags, sugar bogeys, loose tools and utensils, a large assortment of general stores, office furniture, and numerous other effects.

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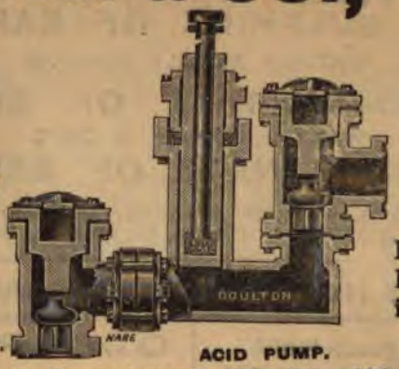

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No. 1 Sack Holder,
For 4, 6, and 8 Bushel Sacks.
5ft. 6in. by 2ft. 4in.
Weight, 49 lbs.
Price ... ... £1 5s.

No. 2 Sack Holder,
For ½, 1, and 2 Bushel Sacks.
4ft. 4in. by 2ft. 2in.
Weight, 42 lbs.
Price ... ... £1 2s. 6d.

Carriage Paid.
Sack Holders can be adjusted to any size of Sack.
HOLDERS made in different sizes.

With this Machine one can do the work of two in filling Sacks. It is simple in construction, and not liable to get out of order; is easily managed, and adjustable to any kind of Sack. It is invaluable to Farmers, Seed, Grain and Potato Merchants, Oil and Colourmen, Druggists, and Chemical Manufacturers, and can be easily carried about with ease by a lad. The saving of actual labour in filling Sacks of any material will quickly cover the cost of the Machine.

Illustrated Price Lists on application.
Samples may be seen at the Office this paper.

Central Plaster, Whiting, and Salt Depot.
Brewer Street, Port Street, Manchester, February 8th, 1896.

s. J. M'DOWALL & Co.
90, Berkeley Street, Glasgow.
DEAR SIRS,—We have been using your Sack Holder for some time now, and we find them a great labour
Yours Respectfully, E. READ & SONS. (A. E. READ.)

Makers: J. M'DOWALL & CO., 230, Berkeley St., GLASGOW.

AGENTS WANTED.

Tender.

CORPORATION OF ILKESTON.

GAS DEPARTMENT.

SURPLUS TAR.

THE Gas Committee invite Tenders for SURPLUS TAR for one year, from October 15th.

Tenders to be sent in before that date on forms to be obtained from

F. C. HUMPHREYS,
Engineer and Manager.

Sales by Auction.

ON TUESDAY NEXT,

TO BE SOLD, pursuant to an order of the High Court of Justice (Chancery Division), Hodgson v. Martineau, 1895. H. 52, and Industrial and General Trust (Limited) v. Martineau, 1895, I. 17. with the approbation of Mr. Justice North, to whom these actions are attached.

IMPORTANT FREEHOLD SUGAR REFINERY, situate on the Thames adjoining the Victoria Docks, with siding to the Great Eastern Railway, fitted with modern Plant and Machinery, equal to an output of 1,800 tons of sugar per week. With possession.—Mr. F. J. Terry Horsey, of the firm of

MESSRS. FULLER, HORSEY, SONS & CASSELL, will SELL BY AUCTION, on the Premises, on Tuesday, October 6th, at Twelve o'clock precisely (unless previously sold by private contract), the VALUABLE and EXTENSIVE FREEHOLD PROPERTY known as Clyde Wharf Sugar Refinery, in the occupation of Messrs. David Martineau and Sons (Limited). The premises have a frontage to the river Thames of about 300 feet, and a ground area of about seven acres.

The buildings are most substantially erected, and comprise: The new sugar house, 77ft. by 71ft., of 5 floors of fireproof construction throughout; the second sugar house, 110ft. by 62ft., of 8 floors; range of warehouses, 122ft by 103ft., of 3 floors; bonded warehouse. 126ft. by 82ft., of 6 floors; cube sugar cutting and cooling houses; two charcoal reburning houses; cube sugar warehouse, 150ft. by 52ft.; saccharum house, 62ft. by 52ft.; general stores, 110ft. by 52ft., of 4 floors; engineers', smiths', plumbers', coopers', and carpenters' shops; three boiler houses; five chimney shafts; hydraulic and other engine houses; well house, with artesian well, affording an abundant supply of water; gas works; stabling, offices, laboratory, dwelling-house, cottages, and other buildings. The whole of the costly fixed plant, machinery, and fixtures will be included in the purchase.

In the event of the Freehold Refinery, with fixed plant, being sold in one lot, the loose plant, tools, and utensils will immediately be offered piecemeal, but if no satisfactory bid for the property as a whole be made, the Freehold Land and Buildings, which are available for a brewery, bonded warehouses, or other large business undertaking, will then be submitted for sale separate from the fixed plant and machinery, and afterwards the whole of the plant, machinery, tools and utensils, both fixed and loose, in lots in detail as per catalogue.

May be viewed by orders, and particulars, plans, and conditions of sale, obtained of Messrs. Golding and Hargrove, solicitors, 99, Cannon-street, E.C.; C. Fitch Kemp, Esq. 73, Lombard-street, E.C.; and of the Auctioneers, 11, Billiter-square, E.C.

To Sugar Refiners, Engineers, and others.—Important Sale of Sugar Refinery Plant, commencing Tuesday, October 6th, at 12 o'clock precisely, and continuing daily till the 15th.

Mr. F. J. Terry Horsey, of the firm of

MESSRS. FULLER, HORSEY, SONS & CASSELL, will SELL BY AUCTION, in Lots, on the Premises Clyde Wharf, Victoria Docks, Canning Town, on Tuesday October 6th, at Twelve precisely (unless previously sold as a whole), PLANT and MACHINERY, including seven copper and three cast iron vacuum pans, up to 11ft. 6in. diameter, 12ft. deep, with copperworms and condensers, &c.; five horizontal and three vertical vacuum pumps, six crystallising cylinders, two superheaters, two copper and five cast iron cooling pans, two Hersey's granulators, two cube sugar drying stoves, eight ditto cutting machines, and four punching machines; cube moulds, washing machine, copper and iron mixers; seven Johnson's filter presses, 42 cast iron bag filters, single, double, and three-throw syrup and liquor pumps, four Worthington pumps, and steam pumps various; 44 centrifugal machines, up to 72in.; one copper and 10 cast iron blowing-up cisterns, 12 wrought iron sugar cleansing tanks, numerous liquor, syrup, treacle, condense water, and other tanks, 48 charcoal cisterns, 19 charcoal re-burning kilns, hydraulic lifts and presses, conveyors and elevators; two liquor distributors, patent water heater, saccharum vats, five screw cutting and other lathes, shaping machine, three drilling and two screwing machines, 5cwt. steam hammer, circular saw bench, overhead traveller, a bag printing machine, hydraulic coal crane with conveyor and steam engine; two weighbridges, Carter's disintegrator; horizontal expansive engine by Marshall, 20in. cylinder, 3ft. stroke; pair of horizontal engines by Moreland, 18in. cylinders, 2ft. stroke; two pairs hydraulic pumping engines; 21 horizontal and vertical engines various, by Tangyes, Duncan, Stewart & Co., and other makers; two steam and three

(Continued on page 6.)

Sales by Auction.—Cont.

(Continued from page 5.)

Miscellaneous.

AN Englishman, resident in France

CHEMIST, who has been engaged at

CHEMIST WANTED; one who

ELECTROCHEMIST wanted to

MAN Wanted, to make Cyanide of

Oils, Tallow and Soaps. Chemist

TECHNICAL Chemist, who has

WANTED a good Surveyor and

WANTED, by an English and

YOUNG MAN (21), 7 years in the

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BOILERS, ENGINES, PUMPS,

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PURE WHITE SULPHATE OF ALUM
BLANC FIXE, CHLORIDE, NITRAT
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PURE PRECIP. CARBONATE OF BARYTES

Also Hydrate and Anhydrous Alumina, Chloride and Carbo
Alumina, Aluminate of Soda, Hydrate of Barium, &c.

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ALL SIZES OF CARBOYS KEPT & KINDS & HAMPERS IN STOCK.

ALBUMENS, Pastes, Arabic Solutions, Vegetable and Animal Size, Gums, GLUES, PREPARED PITCH, Precipitated Bone Phosphate, Neatsfoot Oil, Greases, Manure Materials, &c.

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CHEMICAL & ASSAY BALANCES and WEIGHTS.

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Absorbent of Sulphuretted

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TIES:—

58% Phosphoric Acid, Acetates, Oxalic Acid, Tartaric Acid, Salicylic Acid, Carbolic Acid, Camphor, Stearine, Glycerine, OLEINE

Castor Oil, Olive Oil, Essent. Oils, Glucose, Grape Sugar, Cane Syrup, Treacle, Nitrate of Silver (Pure)

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CORRESPONDENCE SOLICITED.

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MANCHESTER CORPORATION GASWORKS.

SPENT OXIDE.

THE Gas Committee of the Corporation of Manchester are prepared to receive TENDERS for the PURCHASE and immediate REMOVAL of about 300 Tons of SPENT OXIDE from the Bradford Road Gasworks. The Committee do not bind themselves to accept the highest or any tender. Sealed tenders, addressed to the Chairman of the Gas Committee, and endorsed "Tender for Spent Oxide," must be delivered at the offices of the Gas Department not later than 10 a.m. on Friday the 16th inst. Forms of tender and samples of the oxide may be obtained on application to Mr. Charles Nickson, superintendent of the Gas Department.

By order,
WM. HENRY TALBOT,
Town Clerk.

Town Hall, Manchester,
5th October, 1896.

CORPORATION OF ILKESTON.

GAS DEPARTMENT.

SURPLUS TAR.

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F. C. HUMPHREYS,
Engineer and Manager.

Miscellaneous.

☞ **Replies to Advertisements addressed to the "Chemical Trade Journal" Office are forwarded to Advertisers, post free.**

AN Englishman, resident in France 20 years, with first-class business qualifications, wishes to negotiate Agencies for sale of Chemicals, Manure, etc., in France.—Address, Davies, 18, Rue la Fontaine, Paris.

A YOUNG CHEMIST, with home and Continental training, wishes Position in Works. Address "J. W. H.," *Chemical Trade Journal* Office, Manchester.

CHEMIST, Ph.D., four years' University training, who has had wide experience in German and English Works and Laboratories, seeks Position or Partnership. Chemical Works, Dye and Printing Works, or Wholesale Business.—Address, "Ph.D.," *Chemical Trade Journal* Office, Manchester.

ELECTRO-CHEMIST wanted in Chemical Works employing several Electro-Chemical processes. Must be capable of carrying on research and experimental work.—Address, giving full particulars and salary required to "L.C.A.," care of J. W. Vickers, 5, Nicholas-lane, London, E.C.

OILS, Tallow, Soaps, Manures.—Chemist is open for engagement, practical experience in large Lancashire Works. Analysis, Bleaching, Soap Boiling. Moderate salary.—Address "A," *Chemical Trade Journal* Office, Manchester.

TECHNICAL Chemist, who has been many years in charge of Chemical and Metallurgical Works, desires suitable position. Advertiser has a thorough scientific education, also experience in the erection of plant and management of men.—Address "P. N.," *Chemical Trade Journal* Office, Manchester.

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NITRIC ACID—CAUSTIC SODA. The Chemical and Electrolytic Syndicate, Limited, having completed the Demonstration of their Nitric Acid—Caustic Soda Process, are prepared to grant Licenses to work the same.—Apply to the offices of the Company, 6, Clement's-lane, London, E.C.

Miscellaneous.—Cont.

BOILERS, ENGINES, PUMPS, Cast and Wrought-iron TANKS, VACUUM and STEAM PANS, and every description of Second-hand PLANT and MACHINERY. Catalogues sent free on application.—Henry Roberts & Co., Engineers and Copper smiths, Bancroft Road, Mile End, London, E.

CHARCOAL for Sale, best quality.—J. Hughes and Son, Whitecroft Chemical Works, Parkend, Glos.

FUSEL OIL for Sale, regularly, at Cheap Prices.—Buyers requested to reply to "S.400," *Chemical Trade Journal* Office, Manchester.

JOHNSON'S FILTER PRESSES for SALE; several Second-hand, in first-class order. Low prices to clear.—R. W. Andrews & Co., 24, Gray's Inn Road, London, W.C.

SALT or CHEMICALS—To be Let on long Lease, an Eligible SITE for SALT or CHEMICAL WORKS, in the Cheshire Salt District, with magnificent supply of natural Brine of highest strength.—Address in first instance, Davis Bros., 32, Blackfriars-street, Manchester.

SPENT OXIDE WANTED.—J. Hardman, Chemical Works, Milton, Staffs.

SULPHURIC ACID FOR SALE (B.O.V. & R.O.V.) Made from Spent Oxide.—J. Hardman, Chemical Works, Milton, Staffs.

WELDON MUD.—Wanted, to purchase in two ton lots.—Address, "Mud," *Chemical Trade Journal* Office, Manchester.

WOODEN VESSELS of every description, New or Second-hand; all shapes, dimensions, and capacities. We have on hand the largest stock in England, and firms requiring anything in this direction are kindly invited to write for particulars, etc., to Henry Roberts & Co., Vat and Back Makers, Bancroft Road, London, E.

IT IS WORTH YOUR WHILE TO BUY DIRECT. THE RELIANCE LUBRICATING OIL COMPANY SUPPLY, ON APPROVAL, HIGH-CLASS HYDRO-CARBON NON-CORROSIVE LUBRICANTS, which, through the superiority, have the largest sale in the world. Engine, Cylinder, and Machinery Oils, 11½d.; Spindle Oil, 9½d.; Loom Oil, 10½d.; Extra Special Cylinder Oil, 1s. 4d.; Extra Special Engine Oil, 1s. 4d.; Gas Engine and Dynamo Oils, 1s. 6d. per gallon; Light Machine Oil, 10½d.; barrels free and carriage paid.—**Reliance Lubricating Oil Co.**, 19 and 22, Water Lane, Great Tower Hill, **London**, E.C. Depôts at Liverpool, Bristol, Hull, Cardiff, and Glasgow. Telegrams: "Subastral, London."

TO BE SOLD, the LANCASHIRE MANURE COMPANY'S WORKS at Widnes with Machinery and 24,420 square yards of Freehold Land. Address J. Hosking, 16, Fenwick Street Liverpool.

£700 will buy Chemical Works, a few miles outside Manchester, with good Canal and Railway accommodation; also a large house attached, containing nine bedrooms, &c., &c., which could be used as residence or for offices, storerooms, &c. Also the following Plant included:—10 large Wooden Vats, Steam Boiler, Vertical Pump (Pearn's), Steam Engine, 2 large Phosphate Vats, Chemic Apparatus for making Bleaching Liquor; Pump for working same. Hoist, Grindstone, lot of Piping, Shafting, Stables, &c., &c. Mortgagee wishes to realise.—Apply Box 141 G.P.O., Manchester.

PLATINUM Utensils, Scrap, Lamp Ends, etc. Best Prices given by Derby and Co. 44, Clerkenwell Road, London, E.C. N.B.—Platinum Sold

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Sole Maker of MILBURN'S Patent Conoidal Stone Grinding

Especially suitable for cert materials, Wet or Dry.

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MANCHESTER CORPORATION GASWORKS.

SPENT OXIDE.

THE Gas Committee of the Corporation of Manchester are prepared to receive TENDERS for the purchase and removal of about 600 tons o Spent Oxide from the Rochdale Road Gasworks. The Committee do not bind themselves to accept the highest o any tender. Sealed tenders, addressed to the Chairman o the Gas Committee, and endorsed "Tenders for Spen Oxide," must be delivered at the offices of the Gas Department not later than 10 a.m. on Wednesday the 11th November proximo. Forms of tender and further particulars may be obtained on application to Mr. Charles Nickson Superintendent of the Gas Department.—By order,

WILLIAM HENRY TALBOT, Town Clerk.

Town Hall, Manchester, 30th October, 1896.

Miscellaneous.

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A CHEMIST, aged 30 years, formerly Pupil at the Polytechnic School of Zurich (Switzerland), an experienced Analyst, knowing perfectly English, French, German, and Russian, desires a Situation in Industrial Works, Laboratory, or as Agent in England or abroad. Very good references.—Address, "A. J. J.," *Chemical Trade Journal* Office, Manchester.

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Miscellaneous.—Cont.

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CHARCOAL for Sale, best quality.—J. Hughes and Son, Whitecroft Chemical Works, Parkend, Glos.

FOR SALE, Cheap, Four good C. I. TANKS, 3-/33 ft., by 7ft. 6in.—For full particulars and price apply Thos. W. Ward, Sheffield.

GAS TAR and AMMONIACAL LIQUOR Wanted.—Apply, Josiah Hardman, Milton, Staffs.

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£700 will buy Chemical Works, a few miles out-side Manchester, with good Canal and Railway accommodation; also a large house attached, containing nine bedrooms, &c., &c., which could be used as residence or for offices, storerooms, &c. Also the following Plant included:—10 large Wooden Vats, Steam Boiler, Vertical Pump (Pearn's), Steam Engine, 2 large Phosphate Vats, Chemic Apparatus for making Bleaching Liquor; Pump for working same. Hoist, Grindstone, lot of Piping, Shafting, Stables, &c., &c. Mortgagee wishes to realise.—Apply Box 141 G.P.O., Manchester.

PLATINUM Utensils, Scrap, Lamp Ends, etc. Best Prices given by Derby and Co. 44, Clerkenwell Road, London, E.C. N.B.—Platinum Sold

"UP-TO-DATE" RECIPES, NEW INVENTIONS AND SPECIALITIES in Oils, Greases, Soaps, Paints, Varnishes, Enamels, Blackings Blues, Polishes, etc., etc., practical working recipes with latest improved English, Continental and American methods. Prize and Gold Medal brands. Cheapened Substitutes, Utilization of Wastes and Refuse, etc.; any samples matched. Write for Lists.—Lewis Jameson & Co. Balmoral-buildings, 91, Queen Victoria-street, London, E.C., and at 47, College-street, Islington, London, N.

AMMONIA, all qualities and strengths. Enquiries solicited. BROTHERTON & Co., Birmingham, Leeds, and Wakefield

Advertisements which arrive too late for insertion on this page will be found on first page of Matter (opposite Leading Article).

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PURE ACIDS, A Speciality.

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MANUFACTURERS OF

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In consequence of the increase in the number of candidates whose applications for examination have been accepted by the Council, it is probable that more than the two ordinary examinations (January and July) may be held in 1897.

Application forms can be obtained from the Secretary at the above address.

All candidates must produce evidence of having passed a preliminary examination in subjects of general education, and of having taken a systematic course of at least three years' study in one of the colleges approved by the Council, or of having been engaged for two years in the laboratory of a Fellow of the Institute, and for two other years in one of the approved colleges.

The Council desire it to be understood that the right to use the letters A.I.C. and F.I.C. belongs to persons who have passed through the course of study and the examinations prescribed by the Institute.

A prospectus containing full particulars of the regulations for admission to the membership of the Institute may be obtained from Messrs. Blundell, Taylor, and Co., 173, Upper Thames-street, London, E.C., price one shilling.

By order of the Council,
J. MILLAR THOMSON, Registrar

A CHEMIST, aged 30 years, formerly Pupil at the Polytechnic School of Zurich (Switzerland), an experienced Analyst, knowing perfectly English, French, German, and Russian, desires a Situation in Industrial Works, Laboratory, or as Agent in England or abroad. Very good references.—Address, "A. J. J.," *Chemical Trade Journal* Office, Manchester.

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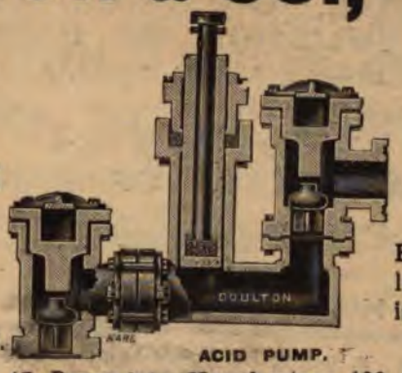

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By order of the Board,
FRANK HUXHAM, Secretary.

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Nov. 26th, 1896.

Miscellaneous.

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JOHN PHILLIPS, Secretary.

Chief Offices, Canons'-marsh,
26th November, 1896.

Miscellaneous.

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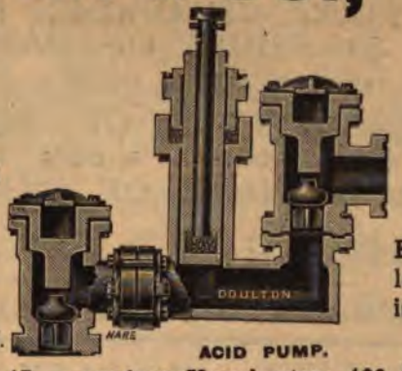

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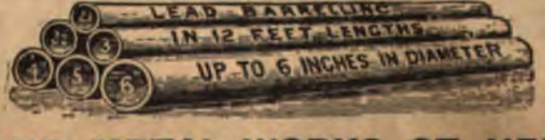

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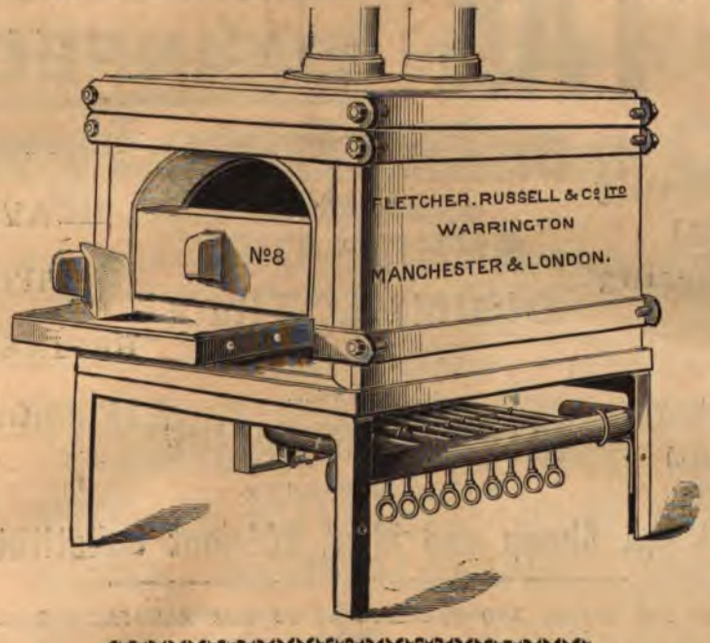

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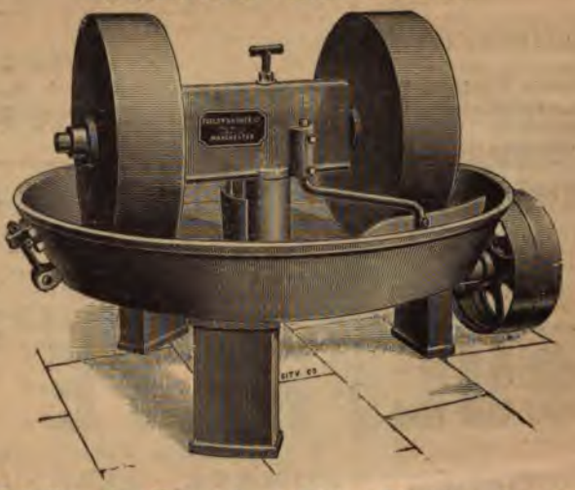

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